

#### **Enduring Resources**

475 17<sup>τt</sup> Street Suite 1500 Denver Colorado 80202 Telephone 303 573-1222 Fax 303 573 0461

June 6, 2005

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210 P. O. Box 145801 Salt Lake City, Utah 84114-5801

Attn.: Ms. Diana Whitney

RE: Southam Canyon #9-24-24-36

SESW Sec. 36 T9S-R24E Uintah County, Utah

Dear Ms. Whitney:

Enclosed are two original applications to drill concerning the referenced proposed well.

Enduring Resources, LLC is requesting the Utah Division of Oil, Gas and Mining to hold this application and all future information as confidential.

If any questions arise or additional information is required, please contact me at 303-350-5114.

Sincerely,

Phyllis Sobotik

Regulatory Specialist

/ps

Enclosures:

xc: American Gilsonite Co.

29950 S. Bonanza Hwy. Bonanza, Utah 84008 Attn.: Mr. Jared Jackson

JUN 0 8 2905



AMENDED REPORT (highlight changes)

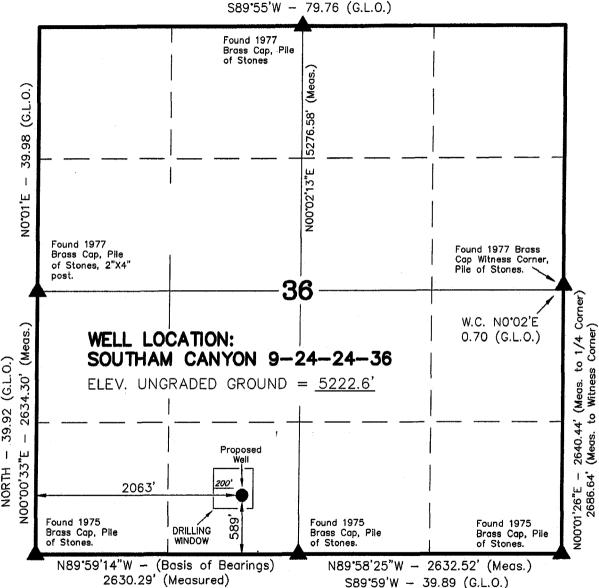
FORM 3

DIV. OF U.S. GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

		APPLICATION	ON FOR	PERMIT TO	DRILL	5. MINERAL LEA Fee		6. SURFACE: Fee
1A. TYPE OF WO	PRK:	DRILL 🗹 RE	ENTER	DEEPEN		7. IF INDIAN, ALI	OTTEE OR TE	RIBE NAME:
B. TYPE OF WE	u: OIL	GAS 🗾 OT	HER	SIN	GLE ZONE MULTIPLE ZON	E B. UNIT OF CA AG	GREEMENT NA	
2. NAME OF OPE		ПС	· · · · · · · · · · · · · · · · · · ·			9. WELL NAME a	ind NUMBER:	
3. ADDRESS OF	OPERATOR:			00 00	PHONE NUMBER:	10. FIELD AND F	Canyon S	9-24-24-36 DCAT:
		00 <sub>CITY</sub> Denver		CO ZIP 802		11. QTR/QTR, SE	CTION, TOW	ACU NSHIP, RANGE,
AT SURFACE:	589' FSL	2063' FWL Se	ec 36 T9S F	704 X 24E S.L.B.8	39.986730 M.	MERIDIAN:		24E
AT PROPOSED	PRODUCING 2	zone: Same as a	above 44	276894	109.163946		,,,,	
		RECTION FROM NEARES		ST OFFICE:		12. COUNTY:		13. STATE: UTAH
		terly from Verna		1 16 NUMBER O	F ACRES IN LEASE:	Uintah	ACCIONED	
589'	JINEARLOTTI	OF ERT FOR LEASE LINE	. (1.661)	16. NOMBER O	2403.9	17. NUMBER OF ACRES	ASSIGNED T	O THIS WELL:
18. DISTANCE TO APPLIED FOR	O NEAREST WE	ELL (DRILLING, COMPLET	TED, OR	19. PROPOSED	DEPTH:	20. BOND DESCRIPTION	N:	
1189.69'					6,455	RLB0008031		
5222.6' G		HER DF, RT, GR, ETC.):		10/15/20	ATE DATE WORK WILL START:	23. ESTIMATED DURAT  20 days	ION:	
							<del></del>	
24.	I	·	<del></del>		ND CEMENTING PROGRAM			
12-1/4"	8-5/8"	E, GRADE, AND WEIGHT  J-55	24#	2,000		ANTITY, YIELD, AND SLUR		40.0
	0-0/0	J-00	2-411	2,000	Prem	462 sx 236 sx	1.81	12.6 ppg
7-7/8"	4-1/2"	N-80/I-80	11.6#	6,455		292 sx	3.38	15.6 ppg 11.0 ppg
				0,100	50/50 Poz CI G	1057 sx	1.31	14.3 ppg
					00,001,02,010	1007 3X	1.01	14.5 ppg
		7,00						
25.				ATTA	CHMENTS			
VERIFY THE FOL	LOWING ARE A	ATTACHED IN ACCORDA	NCE WITH THE U	TAH OIL AND GAS C	ONSERVATION GENERAL RULES:		<u> </u>	
<b>✓</b> WELL PL	AT OR MAP PRI	EPARED BY LICENSED S	URVEYOR OR EI	NGINEER	COMPLETE DRILLING PLAN			
<b>Z</b> EVIDENC	E OF DIVISION	OF WATER RIGHTS APP	PROVAL FOR USE	E OF WATER	FORM 5, IF OPERATOR IS PE	RSON OR COMPANY OTH	IER THAN THE	ELEASE OWNER
	Phyll	iş Sobotik			Pogulatani Ca	o a i a li a t		
NAME (PLEASE I	PRINT)		10	· · · · · · · · · · · · · · · · · · ·	Regulatory Sp	/ nm /		
SIGNATURE	yrige	Ch. DODOC			DATE	105		
(This space for Sta	te use only)				Approved by the	E-100		
				**************************************	Utah Division of			
API NUMBER ASS	SIGNED:	43-047-34	879	.A.	Oil, Gas and Minit	N.	Dr/	) - II
				_	Date: 07-11-05	+++	ur:	CEIVED
(11/2001)				(See Instruction	Mon sound bridge		JUN	0 8 2005

# T9S, R24E, S.L.B.&M.



## ▲ = SECTION CORNERS LOCATED

BASIS OF ELEVATION IS TRIANGULATION STATION JEK 9 ET (1966) LOCATED IN THE NW 1/4 OF SECTION 32, T9S, R25E, S.L.B.&M. THE ELEVATION OF THIS BENCH MARK IS SHOWN ON THE SOUTHAM CANYON 7.5 MIN. QUADRANGLE AS BEING 5729'.

S89'56'W - 39.85 (G.L.O.)

S89'59'W - 39.89 (G.L.O.)

SOUTHAM CANYON 9-24-24-36 (Proposed Well Head) NAD 83 Autonomous

LATITUDE = 39' 59' 12.2" LONGITUDE = 109' 09' 52.8"

## ENDURING RESOURCES

WELL LOCATION, SOUTHAM CANYON 9-24-24-36, LOCATED AS SHOWN IN THE SE 1/4 SW 1/4 OF SECTION 36, T9S, R24E, S.L.B.&M. UINTAH COUNTY, UTAH.

#### NOTES:

80.04

N0.02'E

- 1. Well footages are measured at right angles to the Section Lines.
- 2. Bearings are based on Global Positioning Satellite observations.
- 3. The proposed well head for Southam Canyon 9-24-23-36 bears N00'29'58"E 1189.69' from the propaosed well head for Southam Canyon 9-24-24-36.

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUARS SURVEYS MADE BY ME OR UNDER MYSSIFER TO THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELLETS & No.362251

REGISTERED LAND SORVERORS
REGISTRATION NO 362361
STATE OF UTAH

# TIMBERLINE LAND SURVEYING, INC.

38 WEST 100 NORTH. - VERNAL, UTAH 84078 (435) 789-1365

DATE SURVEYED: 5-9-05	SURVEYED BY: K.R.K.				
DATE DRAWN: 5-19-05	DRAWN BY: J.R.S.				

SCALE: 1" = 1000' Date Last Revised: 6-5-05, Added note 3

Z )E 10

SHEET

OF 10

Enduring Resources, LLC Southam Canyon 9-24-24-36 SESW Sec. 36 T9S-R24E Uintah County, Utah Lease # Fee

#### **Directions to Proposed Location**

Directions to the proposed location are as follows:

From the intersection of U.S. Hwy 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Hwy 40 approximately 3.3 miles to the junction of State Hwy 45. Exit right and proceed in a southerly direction along State Hwy 45 approximately 35.8 miles to the junction of County B Road 3460 (this road is located approximately 0.3 miles south of Bonanza, Utah). Exit left and proceed in an easterly direction along County B Road 3460 approximately 1.4 miles to the junction of a County D Road. Exit right and proceed in a southeasterly direction along the County D Road approximately 0.4 miles to the junction of a County D Road. Exit right and proceed in a southwesterly direction along the County D Road and an oil field service road approximately 1.2 miles to the proposed access road. Follow road flags in a southwesterly direction approximately 0.9 miles to the proposed location.

The proposed well site is located approximately 43 miles Southeasterly from Vernal, Utah.

## Enduring Resources, LLC Southam Canyon # 9-24-24-36 SESW Sec. 36 T9S-R24E Uintah County, Utah Lease # Fee

#### **ONSHORE ORDER 1 - DRILLING PLAN**

#### 1. Estimated Tops of Geological Markers:

<u>Formation</u>	<u>Depth</u>
Uinta	Surface
Green River	477'
Wasatch	2632'
Mesaverde	4181'

## 2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals: (5231.8' estimated KB)

Substance	Formation	Depth	
	Uinta	Surface	
Oil / Gas	Green River	477'	
Oil /Gas	Wasatch	2632'	
Oil /Gas	Mesaverde	4181'	
	Estimated TD	6455'	

A 12-1/4" hole will be drilled to approximately 2000 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set.

#### 3. Pressure Control Equipment: (3000 psi schematic attached)

A. Type:

Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer with 3,000 psi Casinghead and 3,000 psi Tubinghead equipped per the attached diagrams for 3,000 psi. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, Stroke Counter and flow sensor will be installed to check for flow and monitor pit volume.

**B.** Pressure Rating: 3,000 psi BOPE

C. Kelly will be equipped with upper and lower Kelly valves.

## D. Testing Procedure: Annular Preventer

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

#### **Blow-Out Preventer**

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

#### D. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

Totco directional surveys will be dropped every 2000 feet. Maximum allowable angle is 5 degrees.

#### 4. <u>Proposed Casing & Cementing Program:</u>

## A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (md)
20"	16"				40'
12-1/4"	8-5/8"	24#	J-55	ST&C	0 - 2,000' est
7-7/8"	4-1/2"	11.6#	N-80/I-80	LT&C	0 – 6455'

The surface casing will have guide shoe, 1 jt., insert float collar. Centralize the first 3 joints with bow spring centralizers. Thread lock guide shoe.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

#### B. Casing Design Parameters:

Depth (md)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40	16"			
2000	8-5/8", 24#/ft, J55, STC	1370/1.54(a)	2950/3.34(b)	244/5.85(c)
6455	4-1/2", 11.6#/ft, N-80, LTC	6350/1.91 (d)	7780/2.54 (e)	223/3.47 (f)

- (a.) based on full evacuation with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation with 10.0 ppg fluid on annulus, pipe evacuated

- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient.
- (f.) based on casing string weight in 9.2 ppg mud

#### PROPOSED CEMENTING PROGRAM

#### Surface Casing (if well will circulate)-Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1500	65/35 POZ +6% Gel +10 pps gilsonite + .25 pps Flocele + 3% salt BWOW	462	35%	12.6	1.81
8-5/8"	Tail	500	Premium cmt +2% CaCl +.25 pps flocele	236	35%	15.6	1.18

A cement top job is required if cement fallback is greater than 10' below ground level. Top job cement will be premium cement w/2% CaCl. Volume as required.

#### Surface Casing (if well will not circulate)-Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft³/sx)
8-5/8"	Lead	500	Premium cmt + 2% CaCl +.25 pps flocele	280	60	15.6	1.18
8-5/8"	Top job	As req.	Premium cement + 2% CaCl	Req.		15.6	1.18

#### **Production Casing and Liner-**Cemented TD to Surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft³/sx)
4-1/2"	Lead	2555	Premium Lite II +3% KCL +0.25 pps celloflake +5 pps gilsonite +10% gel +0.5% extender	292	60	11.0	3.38
4-1/2"	Tail	3900	50/50 POZ Class G +10% salt + 2% gel + 1% R-3	1057	60	14.3	1.31

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to surface. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

#### 5. **Drilling Fluids (mud) Program:**

Interval	Mud Weight	Fluid Loss	Viscosity	Mud Type
0'-2000'		No entrl		Air/mist
2000'-3000'	8.4-8.6	No cntrl	28-36	Water
3000'-6455'	8.8-10.0	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

#### 6. **Evaluation Program:**

Tests:

No tests are currently planned.

Coring:

No cores are currently planned.

Logging:

Dual Induction – SFL /Gamma Ray Caliper:

TD to Base Surface Casing

Compensated Neutron/Litho Density Temperature/Gamma Ray: TD to Base Surface Casing

Cement Bond Log / Gamma Ray:

PBTD to Top of Cement

Stimulation:

A stimulation or frac treatment will be designed for completion of this well based on

openhole log analysis. The drill site, as approved, will be sufficient size to accommodate

all completion activities.

#### 7. **Abnormal Conditions:**

No abnormal temperatures or pressures are anticipated. No H2S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 3356 psi (calculated at 0.52 psi/foot max of hole) and maximum anticipated surface pressure equals approximately 1936 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

#### 8. **Anticipated Starting Dates:**

Anticipated Commencement Date-

October 15, 2005

Drilling Days-

Approximately 10 days

Completion Days -

Approximately 10 days

Anticipate location construction within 30 days of permit issuance.

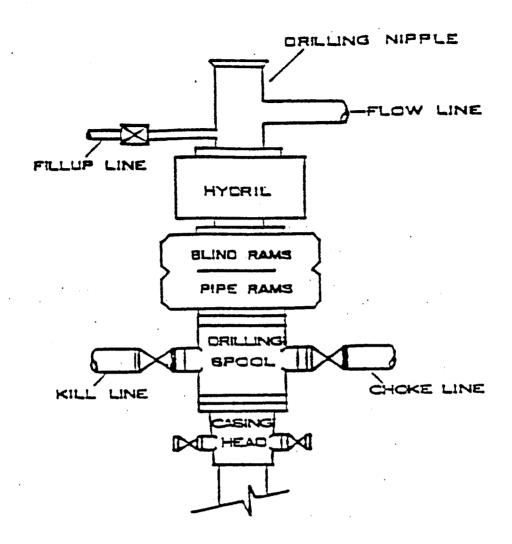
#### 9. Variances:

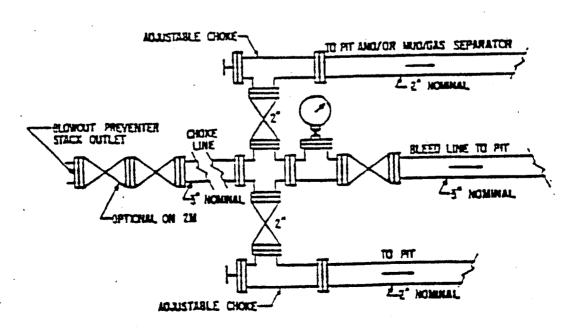
None anticipated

#### 10. Other:

A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location. access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining upon their receipt

# EOP STACK





Enduring Resources, LLC Southam Canyon # 9-24-24-36 SESW Sec. 36 T9S-R24E Uintah County, Utah Lease # Fee

#### **MULTI-POINT SURFACE USE & OPERATIONS PLAN**

#### 1. Existing Roads:

Directions to the proposed location are as follows:

From the intersection of U.S. Hwy 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Hwy 40 approximately 3.3 miles to the junction of State Hwy 45. Exit right and proceed in a southerly direction along State Hwy 45 approximately 35.8 miles to the junction of County B Road 3460 (this road is located approximately 0.3 miles south of Bonanza, Utah). Exit left and proceed in an easterly direction along County B Road 3460 approximately 1.4 miles to the junction of a County D Road. Exit right and proceed in a southeasterly direction along the County D Road approximately 0.4 miles to the junction of a County D Road. Exit right and proceed in a southwesterly direction along the County D Road and an oil field service road approximately 1.2 miles to the proposed access road. Follow road flags in a southwesterly direction approximately 0.9 miles to the proposed location.

The proposed well site is located approximately 43 miles Southeasterly from Vernal, Utah. Refer to attached Topographic Map "A" and "B"

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

## 2. Planned Access Roads:

The proposed access road will be approximately 4,944 feet (0.9 miles) of new construction of which approximately 1,932 feet shall occur on fee acreage and approximately 3,012 feet shall occur on state acreage. No upgrades will be required on the County Class D Roads Please refer to Topo Map "B".

The access road will be crowned 2% to 3%, ditched and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet right-of-way. Maximum grade of road is 5% or less. Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road. No fence crossings, culverts, turnouts, cattleguards or major cuts and fills are expected to be required. Prior to construction or upgrading, the proposed road shall be cleared of any snow and allowed to dry completely.

Surface disturbance and vehicular traffic will be limited to the proposed location and proposed access route. Any additional area needed will be approved in advance. All construction shall be in conformance with the standards outlined in the BLM and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development. 1989.

The road surface and shoulders will be kept in a safe usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear and free flowing and will be maintained according to original construction standards. The access road surface will be kept free of trash during operations. All traffic will be confined to the approved disturbed surface. Road drainage crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the road bed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided. When snow is removed from the road during the winter months, the snow shall be pushed outside of the borrow ditches and the turnouts kept clear so that snowmelt will be channeled away from the road.

#### 3. Location of Existing Wells Within a One Mile Radius: Please refer to Topographic Map "C"

There are no known shut in wells, plugged and abandoned wells, disposal wells, monitoring or observation wells, or injection wells located within a one (1) mile radius of the proposed location.

There is one known producing well – Bonanza #6-36 SENW Sec 36 T9S-R24E

There is one known temporarily abandoned well - Cartwright #2 NWNE Sec 35 T9S-R24E

There are two known water well–WRNUM: 49-206; Application/Claim # A26455 SWNE Sec 2 T10S-R24E - WRNUM: 49-173; Application/Claim # A15344 SWNE Sec 2 T10S-R24E

There are seven water wells with expired claim number-

WRNUM: 49-222; Application/Claim # A29909 SWNE Sec 2 T10S-R24E

There may be drilling activity or permitted wells within in the area.

#### 4. <u>Location of Existing &/or Proposed Facilities:</u>

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope. Refer to Sheet #6.

A dike will be constructed completely around those production facilities which contain fluids (i.e. production tanks, produced water tanks and/or heater treater.) These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank and be independent of the back cut.

All permanent (on site for six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth tone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Inter-Agency Committee.

All facilities will be painted within 6 months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Carlsbad Canyon (2.5Y 6/2).

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

If the well is capable of economic production, a surface gas gathering line and related equipment will be installed. The gas gathering line will be in use year round. Approximately 4,990 feet (0.9 miles) of 6 inch or less diameter steel, unpainted, welded gas gathering line is proposed. Approximately 1,882 feet (0.3 miles) is anticipated to be laid on fee acreage and approximately 3,108 feet (0.6 miles) is expected to be laid on state acreage. The proposed line will begin at the well site, be laid alongside the proposed access road going in a northwesterly direction turning east northeast to continue to tie into an existing pipeline located in the north portion of Sec 36 T9S-R24E. The proposed gathering line will be placed above ground adjacent to the proposed access route; therefore, no additional surface disturbance is anticipated. The line will be welded together and pulled from the well site location and tie-in point when practical; however, it may be necessary to utilize the access road for welding of the line. The line will then be boomed off to the side of the road. The gas meter run will be located within 500' of the wellhead. The meter run will be housed. The gas gathering line will be buried or anchored down from the wellhead to the meter. Please refer to the attached Topographic Map "D".

Upon plugging and abandonment, unused portion of the gas gathering line will be removed and the disturbed area will be re-contoured and restored as near as practical to the original condition. If necessary, re-seeding operations will be performed after completion of other reclamation operations. The appropriate surface management agency will be contacted for the required seed mixture and seeding dates.

#### 5. <u>Location and Type of Water Supply:</u>

Water will be obtained from the White River by Tu and Frum, Inc. Water User Claim #49-2185, Application #T75517, or by Target Trucking Water User Claim #43-2195, or by Dalbo Inc. Water User Claim #43-8496.

Water will be hauled to the location over the roads marked on Topographic Maps "A" and "B".

No water well is to be drilled on this lease.

#### 6. <u>Source of Construction Materials:</u>

Surface and subsoil materials in the immediate area will be utilized for location and access road construction.

Any gravel will be obtained from a commercial source; however, gravel sized rock debris associated with location and access road construction may be used as access road surfacing material.

#### 7. Methods of Handling Waste Materials:

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exits or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that is will not leak, break or allow discharge of liquids.

A plastic reinforced liner is to be used. It will be a minimum of 12 mil thick and felt with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

Any spills of oil, salt water or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

A chemical portable toilet will be furnished with the drilling rig. The toilet will be replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Vernal Wastewater Treatment Facility in accordance with state and county regulations.

Garbage, trash and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported or disposed of annually in association with the drilling, completion or testing of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well.

Produced oil will be stored in an oil tank and then hauled by truck to a crude purchaser facility. Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to an approved disposal site.

#### 8. **Ancillary Facilities:**

During drilling operations, approximately 20 days, the site will be a manned camp. Three or four additional trailers will be on location to serve as the crew's housing and eating facility. These will be located on the perimeter of the pad site within the topsoil stockpiles. Refer to Sheet 5.

## 9. Well Site Layout: (Refer to Sheet #3, #4 & #5)

The attached Location Layout Diagrams describes drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s) and surface material stockpiles(s).

Please see the attached diagram for rig orientation and access roads.

All pits shall be fenced to the following minimum standards:

39 inch net wire shall be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches over the new wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two fence posts shall be no greater than 16 feet.

All wire shall be stretched by, using a stretching device, before it is attached to corner posts.

The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

Location size may change prior to drilling the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig, the location will be re-surveyed and a Form 9 will be submitted.

#### 10. Plans for Surface Reclamation:

#### **Producing Location:**

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, materials, trash and debris not required for production.

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 40 CFR 3162.7.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface 3 feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling and re-contouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

#### Dry Hole / Abandoned Location:

Abandoned well sites, roads and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions and re-establishment of vegetation as specified.

All disturbed surfaces will be re-contoured to the approximate natural contours with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

#### **Seed Mixture:**

The appropriate surface management agency will be contacted for the required seed mixture and seeding dates.

## 11. Surface Ownership: Location, Access Road & Pipeline

American Gilsonite Co.

29950 S. Bonanza Hwy.

Bonanza, Utah 84008

Attn.: Mr. Jared Jackson

Office - 435-789-1921 x 415; Fax - 435-789-1956; Cell - 435-790-7256; E-mail - jjackson@amgc.com

#### 12. Other Information:

**Wildlife Stipulations:** Wildlife stipulations and possible activity restrictions will be detailed in the "Conditions of Approval" received with an approved Permit to Drill. Operator will comply with these wildlife stipulations.

**Archeology:** A Cultural Resource Inventory shall be conducted for the well location, access route and pipeline. The report shall be submitted to the Division of Oil, Gas and Mining upon its receipt.

**Paleontology:** A Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The report shall be submitted to the Division of Oil, Gas and Mining upon its receipt.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the Antiquities Act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

All lease operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations and any applicable Notice to Lessees. The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations. The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites or other applicable facilities.

#### Exhibit "C"

#### RIGHT-OF-WAY and SURFACE DAMAGE AGREEMENT

THIS AGREEMENT is made and entered into by and between, AMERICAN
GILSONITE COMPANY, (hereinafter referred to as "Grantor") and ENDURING RESOURCES
LLC (hereinafter referred to as "Grantee") effective pril 28, 2005

N/2 SW/4; SESW/4; S/2 SE/4

WHEREAS, Grantor is the surface owner of \_\_\_\_\_ quarter Section 36 Township

9 South, Range East, Uintah County, Utah (hereinafter referred to as the "Land(s)").

WHEREAS, Grantee desires to enter onto and cross such Lands for the purpose of drilling an exploratory oil and/or gas well, [Well Name] ("Well"), located in the <u>SE</u> quarter of the <u>SW</u> quarter, Section <u>36</u> Township <u>9</u> South, Range <u>24</u> East, Uintah County, Utah (hereinafter referred to as the "Drillsite").

NOW THEREFORE, for and in consideration of the mutual promises and covenants herein contained, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

- I. Grantee shall pay Grantor the sum of \$\_\_\_\_\_ up front payment for damages to surface of the Lands for road access to the Drillsite and for the Drillsite for the drilling of the Well. Within sixty days of completion of the Well either as a producer or a plugged and abandoned well, Grantee shall survey the new access road and the Drillsite to compensate Grantor for any additional damage that may have occurred during drilling and completion operations. Compensation will be on a \$\_\_\_\_\_ per acre cost for any damages exceeding 4.0 acres and such compensation, if due, will be paid within thirty (30) days of the surveyor's report being released. Grantee shall utilize existing access routes to the maximum extent feasible, so as to minimize surface disturbances for access to facilities.
- II. Grantee and their assigns or agents shall have the right to use a reasonable amount of access road across the Lands and shall have the right to move derricks, drilling tools, vehicles, and all other machinery and equipment necessary or incident to the re-drilling, drilling, testing completion, operation of the Well. Such activity shall be restricted to existing public roads or access roads covered by this agreement. Any roads or surface facilities may be relocated at Grantor's expense if needed due to gilsonite mining or processing in the future.
- III. This Agreement and the rights granted herein are effective and shall continue in full force and effect so long as operations are conducted on the Well. Upon execution of this Agreement, all payments due hereunder shall be paid concurrently. Operations are defined under terms of the oil and gas lease with Grantor, and under the Rules and Regulations defined by the State of Utah.
- IV. Cattle guards of gates will be constructed, if requested by Grantor, at all places where the openings go through the existing fences and gates will be kept closed at all times except when opened for passage of traffic. Also, gates shall be installed to limit access to

producing wells on roads constructed by Grantee if by mutual agreement between Grantee and Grantor.

- V. If there is any fill used for roads constructed across any drainage, then culverts will be used for the free flow of water through said drainage.
- VI. If the access road departs from existing established roadways and new construction is required, topsoil will be segregated and stockpiled for replacement during reclamation activities.
- VII. It is understood that any road constructed across the said Lands shall not exceed 30 feet in total width, including the total disturbed area between the outside of each berm, without the prior approval of Grantor.
- VIII. Upon completion of the Well as a dry hole and the subsequent abandonment thereof, and at the request of the Grantor, any drill pads and newly constructed road will be restored and seeded within 180 days to the condition it was in prior to commencement of operations insofar as reasonably possible. Any preexisting roads, and the improvements thereto, which are constructed by Grantee, shall be left in a good and useable condition for the continued use by Grantor. Reclaimed areas will be reseeded with a wildlife mixture approved by the Utah Division of Wildlife.
- IX. In the event that the Well is completed as a producer of oil and/or gas, Grantee shall build and maintain a permanent access road in conformance with the already established county road including any variances granted by the county by existing roads to the Drillsite. Disturbed areas not used for production will be re-graded and seeded with an approved wildlife seed mix within 90 days unless prohibited by weather.
- X. Upon completion of the Well as a well capable of oil and/or gas production, this Agreement shall continue in full force and effect and Grantee shall pay in advance to Grantor an annual access rental of \_\_\_\_\_ dollars, \$\_\_\_\_ per pad and \$\_\_\_ per acre of roadway (30-foot width), or a minimum of \$\_\_\_\_ to include the pad and roadway for each well, whichever is greater, on or before January 31<sup>st</sup> of each year thereafter until the subject well is plugged and abandoned and operations cease thereon.
- XI. It is expressly understood that the settlement amounts in paragraph I are only for construction of a road and drilling location and is not a settlement for any damages to contiguous property, personal property of the Grantor or a release of any personal injuries that may be sustained by reason of the operations carried on by Grantee or its agents.
- XII. This Agreement does not cover pipeline easements and Grantee acknowledges that it must secure a separate agreement prior to laying pipeline related to production of gas or oil on Grantor's lands.
- XIII. This Agreement shall not be assigned, nor the rights of Grantee hereunder transferred in any manner without the prior written consent of Grantor, which consent shall not be

unreasonably withheld.

- XIV. Grantee shall comply at its own expense with the Workman's Compensation Law of the State of Utah and shall maintain such insurance throughout the duration of this Agreement, and shall furnish Grantor prior to beginning work on the Lands evidence of such insurance and at each policy period thereafter renewal evidence that such insurance is being maintained. Grantee, with respect to its operation in connection with this Agreement, shall also purchase or provide for (1) comprehensive general public liability insurance with a combined single limit not less than One Million Dollars (\$1,000,000) for bodily injury and property damage; and (ii) automobile insurance with a combined single limit of not less than One Million Dollars (\$1,000,000) for bodily injury or property damage. At Grantor's request, Grantee shall furnish Grantor with a certificate or certificates of insurance secured and maintained hereunder and Grantor shall be an additional insured thereon.
- XV. In the event any person or entity (including Grantor) suffers a loss of any kind or character, or death or injury, (1) as a result of a breach of this Agreement by Grantee, or its agents, contractors, or employees, or (2) as a result of Grantee or its agents, contractors or employees performing on the Drillsite or elsewhere, any action, directly or indirectly, in furtherance of a right hereunder, or (3) from any cause whatsoever while being on the Lands and the Drillsite to conduct any work or service for Grantee shall reimburse, indemnify, defend and hold harmless Grantor for any and all losses, costs, claims, liability, litigation, demands, damages and expenses (including all attorney fees) of every kind or character which Grantor may suffer or be subject to as a result of said loss or injury whether or not such losses, costs, claims, liabilities, litigation, demands, damages, and expenses (including all attorney fees) result from the condition of Grantor's premises or facilities, unless through the sole negligence of Grantor or its agents.
- XVI. Grantee shall provide Grantor with not less than forty-eight (48) hours advance notice, either by phone or in person, of Grantee's intent to enter upon the Land for the purpose of commencing operations thereon. Grantee shall conduct its operations in such a manner as to use no more Land than is reasonably necessary and shall use all reasonable efforts not to interfere with the use of the Land by any grazing permitees. All drilling fluid pits shall be fenced within ten days of end of drilling the Well as a producer or dry hole and then the pits will be reclaimed and reseeded within 180 days of the completion of the well as a producer or a dry hole. Surface structures shall be fenced, if they represent a potential hazard to livestock, by mutual agreement between Grantor and Grantee. The type of fencing to be mutually agreed upon by Grantor and Grantee. Grantee will have ten days to effect repairs or problems with fences when notified by e-mail or in writing by Grantee. Grantor can request an extension of the closure of pits beyond the 180 days from the completion of the Well if closing the pits represents a potential hazard or closing the pits at that time will not comply with the State of Utah's reclamation requirements. An extension will not be unreasonably withheld.
- XVII. Grantee shall have the right at any time, and from time to time, to remove any or all property, fixtures, equipment and materials, placed by Grantee on the Land, including the right to draw and remove casing. Within 90 days after plugging of the Well this

agreement will expire and Grantee shall remove all remaining property, fixtures, equipment and materials that were placed by Grantee on the Land. Such removal shall be accomplished at Grantee's sole cost, risk and expense. If such items are not removed within 90 days, Grantor shall have the right to remove those items from the Land and bill the associated cost for such removal to Grantee.

- XVIII. This agreement restricts the Grantee's use of Grantor's lands to the sole purpose of exploration and production of oil and/or gas at this specific site. It does not grant Grantee, its contractors, or its agents the right to use the Grantor's property for any other purpose.
  - XIX. All operations of Grantee hereunder which involve drilling for and producing of oil and gas, or both, or the cessation, or abandonment, of its operations shall be conducted in a good and workmanlike manner and in accordance with standard oil field practices and in accordance with all applicable federal, state and local statutes and regulations including specifically, but not by way of limitation, such laws and regulations governing the operation, maintenance and reclamation of well sites, pipelines, tank batteries, and other related facilities as may be utilized by Grantee and its operations hereunder. Grantee shall further adhere to and abide by all federal, state and local environment statutes and regulations addressing air, water, and solid waste pollution and the handling storage, storage, use and disposal of hazardous substances as prescribed in the Comprehensive Environmental Response, Compensation and Liability Act of 1986, 42 U.S.C. & 9601, et seq. (CERCLA). Grantee shall provide Grantor with copies of all applications for environment laws, governmental requests for any information pertaining to environmental issues relating to the Land or products produced therefrom or Grantee's use thereof, copies of any responses from Grantee's to said requests, and any environmental investigations, reports, or studies involving the Land or products produced therefrom or the use thereof by Grantee which from time to time, may be obtained from Grantee.
  - XX. Grantee also agrees to abide by the laws of regulations of the State of Utah designed to protect gilsonite deposits, including but not limited to those specific rules set forth in the General Rules and Regulations of the Utah Board of Oil, Gas and Mining, as amended, pertaining to such matters.
- XXI. The provisions hereof shall be considered as covenants running with the Land during the life of the Agreement and all modifications thereof, and any assignment of the Agreement shall be subject to the provisions thereof.
- XXII. This Agreement shall not be terminated in whole or in part, nor Grantee held liable for damages, because of a temporary cessation of production or of drilling operations due to breakdown of equipment or due to the repairing of a well or wells or because of failure to comply with any of the express provisions or implied covenants of this Agreement if such failure is the result of the exercise of governmental authority, war, armed hostilities, act of God, strike, civil disturbance, fire, explosion, flood or any other cause, including lack of market, beyond the control of Grantee.

XXIII. Any controversy or claim, whether based in contract, tort or otherwise, arising in any way out of, relating to or in connection with this Agreement (a "Dispute") shall be finally settled by arbitration conducted expeditiously in accordance with the Commercial Arbitration Rules (the "Rules") of the American Arbitration Association (the "AAA"). In the event of a conflict between this Article and the Rules, this Article shall govern. The attorney/client and work product privileges will be honored in the arbitration as though the case were being determined in a Utah state court. The arbitration shall be conducted before one independent and impartial arbitrator selected by the AAA pursuant to the Rules. The arbitration shall be governed by the United States Arbitration Act. 9 U.S.C. § 1-16, to the exclusion of any provision of Texas law inconsistent therewith and which would produce a different result, and judgment upon the award rendered by the arbitrator may be entered by any court having jurisdiction thereof. The place of arbitration shall be Salt Lake City, Utah, and the cost of the arbitration proceeding shall be borne equally by the parties to this agreement and each party shall bear its own attorney's fees, and other expenses, provided that the arbitrator may award attorney fees, filing fees and costs to the prevailing party as the arbitrator deems reasonable and fair. The arbitrators shall determine the claims of the parties and render their final award in accordance with the substantive law of the State of Utah exclusive of its conflict of law rules. The limitations on any actions will be determined under Utah law. The arbitrator shall permit and facilitate such discovery as the arbitrator determines is appropriate in the circumstances, taking into account the needs of the parties and the desirability of making discovery expeditious and cost-effective. The arbitrator shall actively manage the proceedings as the arbitrator deems best so as to make the proceedings fair, expeditious, economical, and less burdensome than litigation. The procedures specified in this section shall be the exclusive means of resolution of Disputes between the parties, provided that either party may seek injunctive action before a court of competent jurisdiction to prevent the occurrence of irreparable harm pending resolution of a Dispute pursuant to the provisions of this section.

XXIV. This Agreement constitutes the entire Agreement between the parties hereto as to the subject matters herein set forth and supersedes all prior written or oral agreements relative thereto. No change, modification, alteration or amendment to this Agreement shall be binding upon the parties hereto except as specifically expressed in writing and signed by each party agreeing to be bound thereby.

AMERICAN GILSONITE COMPANY, Grantor

Bv:

ENDURING RESOURCES LLC, Grantee

By:

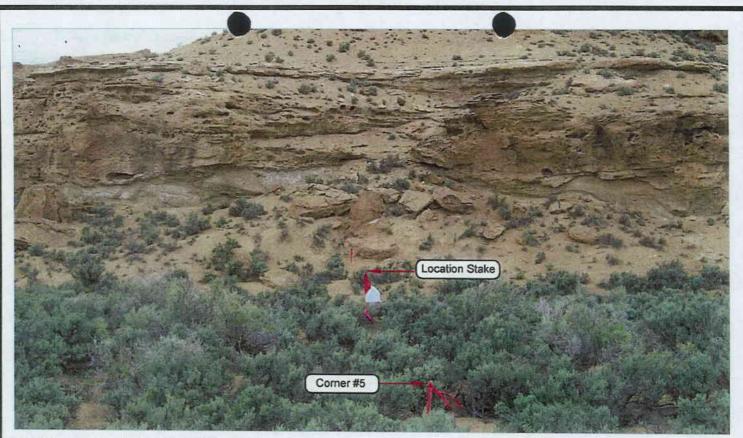


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY

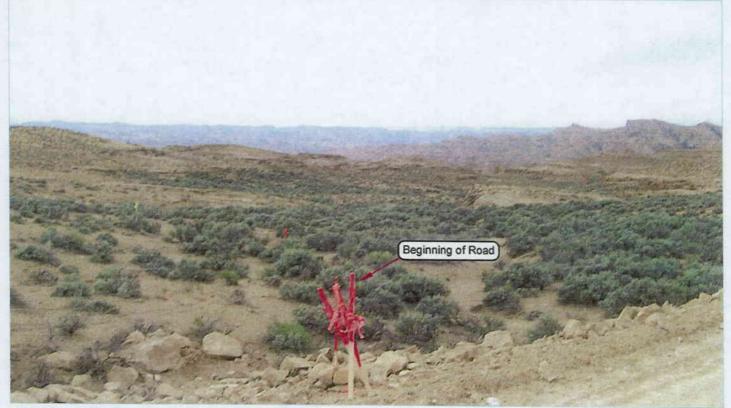


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

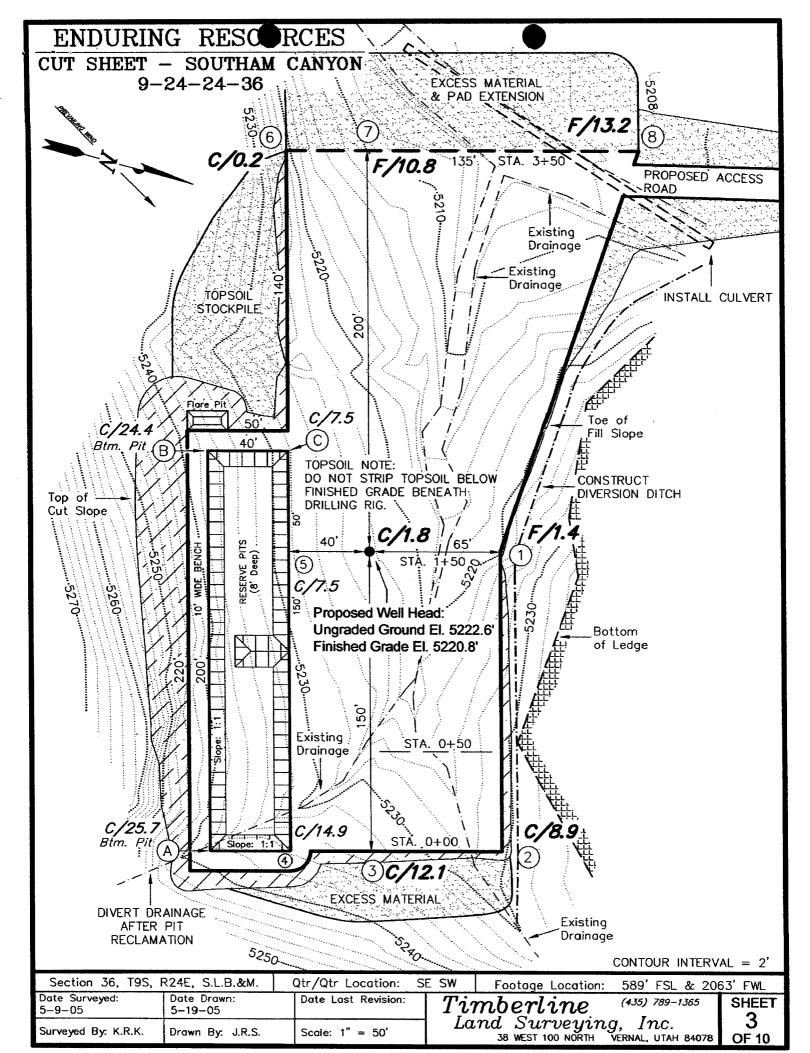
CAMERA ANGLE: SOUTHWESTERLY

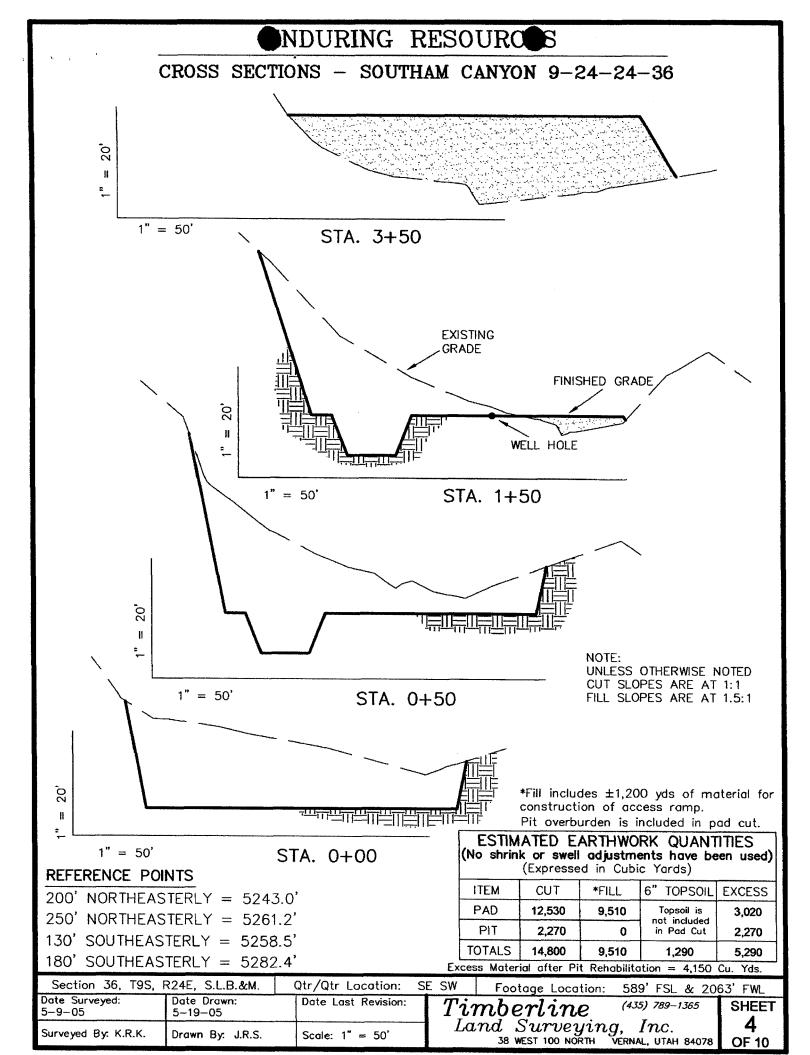
# **ENDURING RESOURCES**

Southam Canyon 9-24-24-36 SECTION 36, T9S, R24E, S.L.B.&M. 589' FSL & 2063' FWL

LOCATION PHOTOS		DATE TAKEN: 05-09-05		
LOOMITON	1110100	DATE DRAWN: 05-18-05	į	
TAKEN BY: K.R.K	DRAWN BY: T.D.H	REVISED:	Ī	

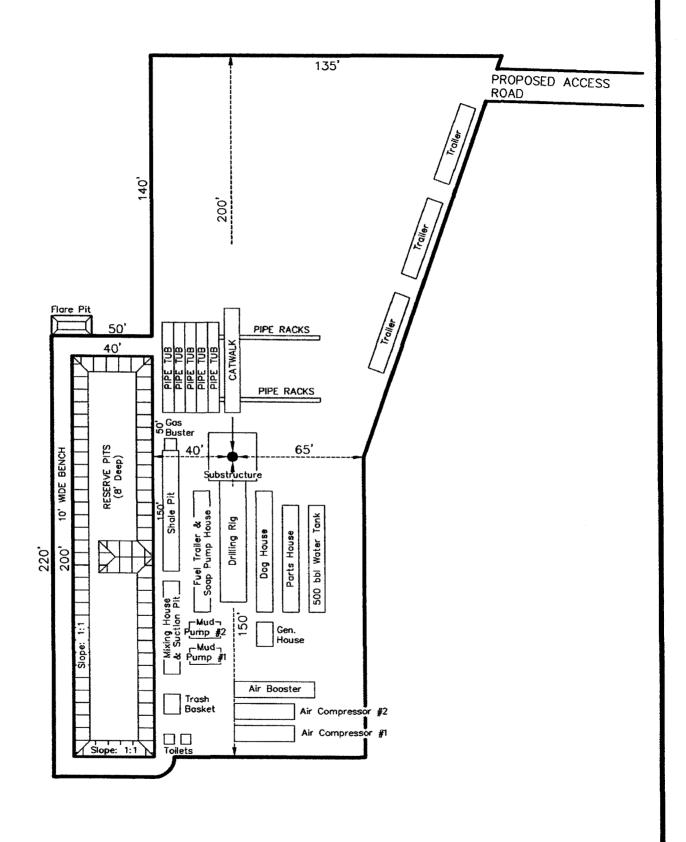
Timberline Land Surveying, Inc. 38 West 100 North Vernal, Utah 84078 (435) 789-1365 SHEET 1 OF 10





# ENDURING RESOURCE

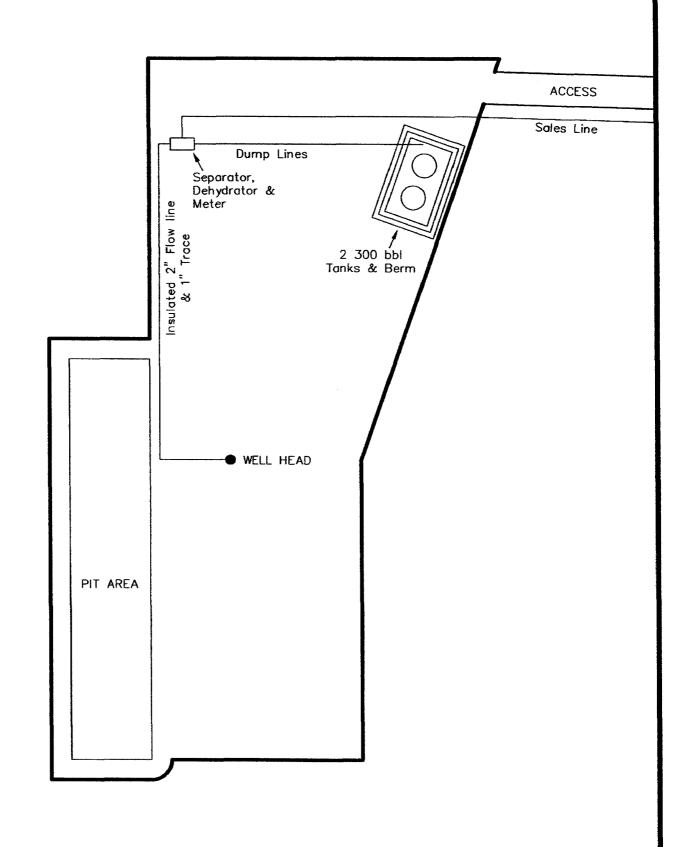
# TYPICAL RIG LAYOUT - SOUTHAM CANYON 9-24-24-36



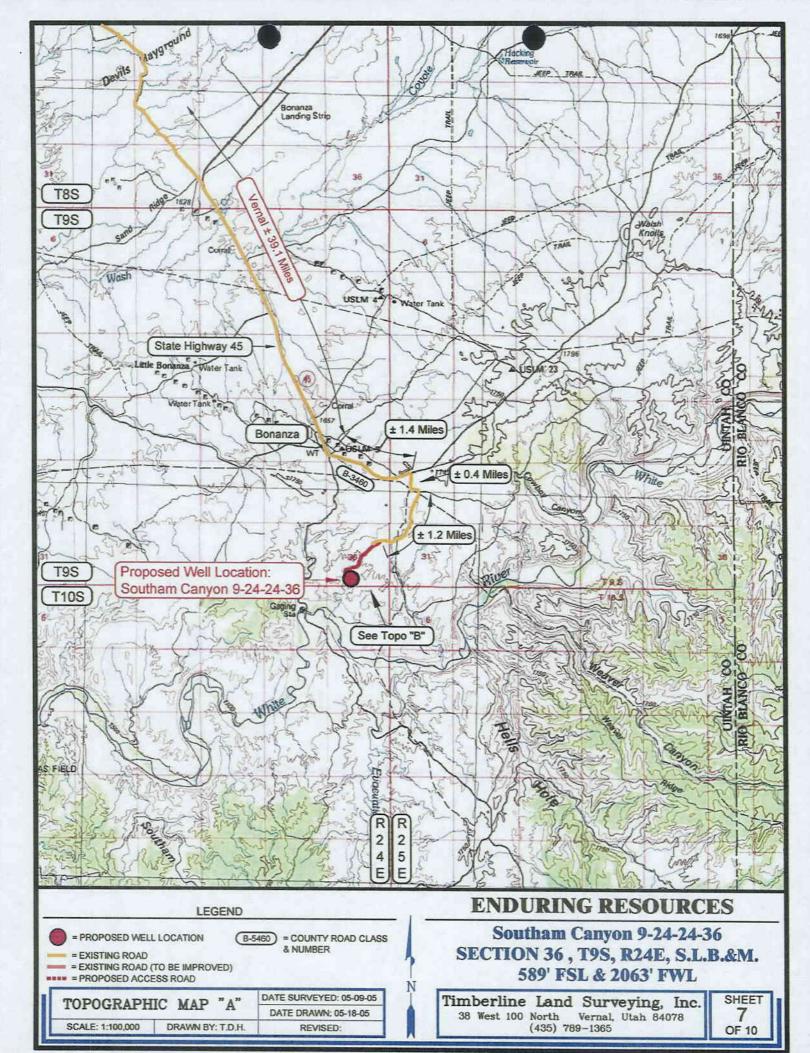
Section 36, T9S,	R24E, S.L.B.&M.	Qtr/Qtr Location: S	SE SW	Footage Location:	589' FSL & 206	33' FWL
Date Surveyed: 5—9—05	Date Drawn: 5-19-05	Date Last Revision:		mberline	(435) 789–1365	SHEET
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	La	and Surveying	$J,\ Inc.$ WERNAL UTAH 84078	OF 10

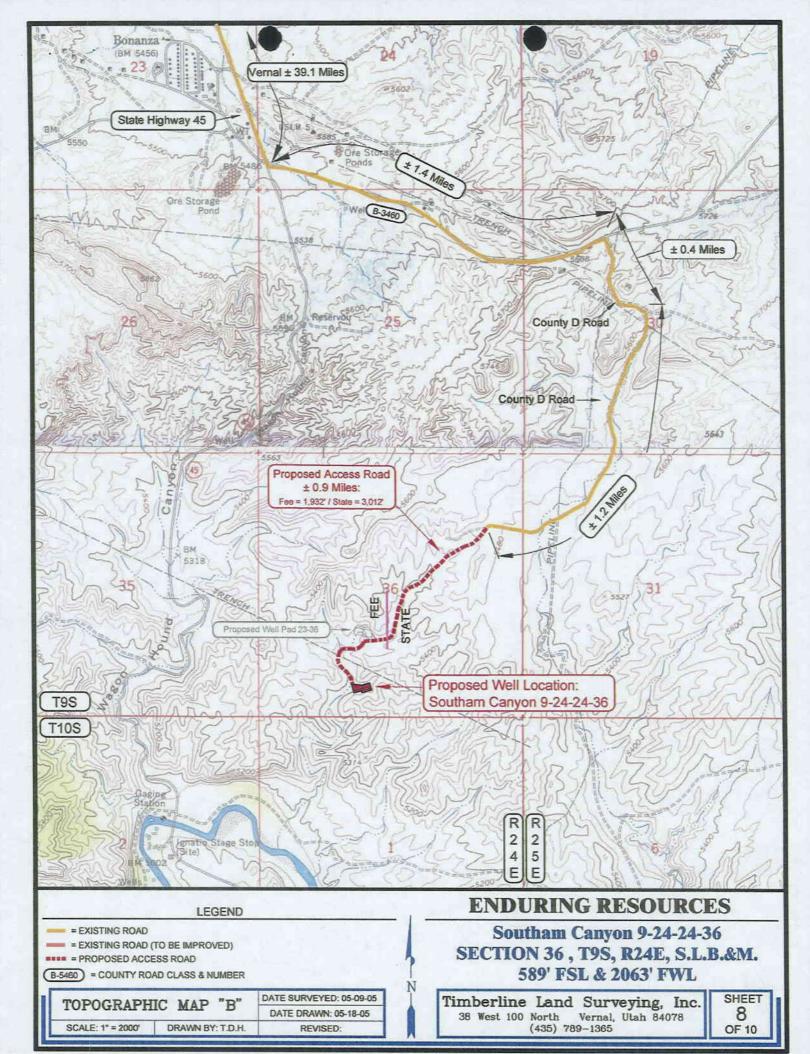
# DURING RESOURCE

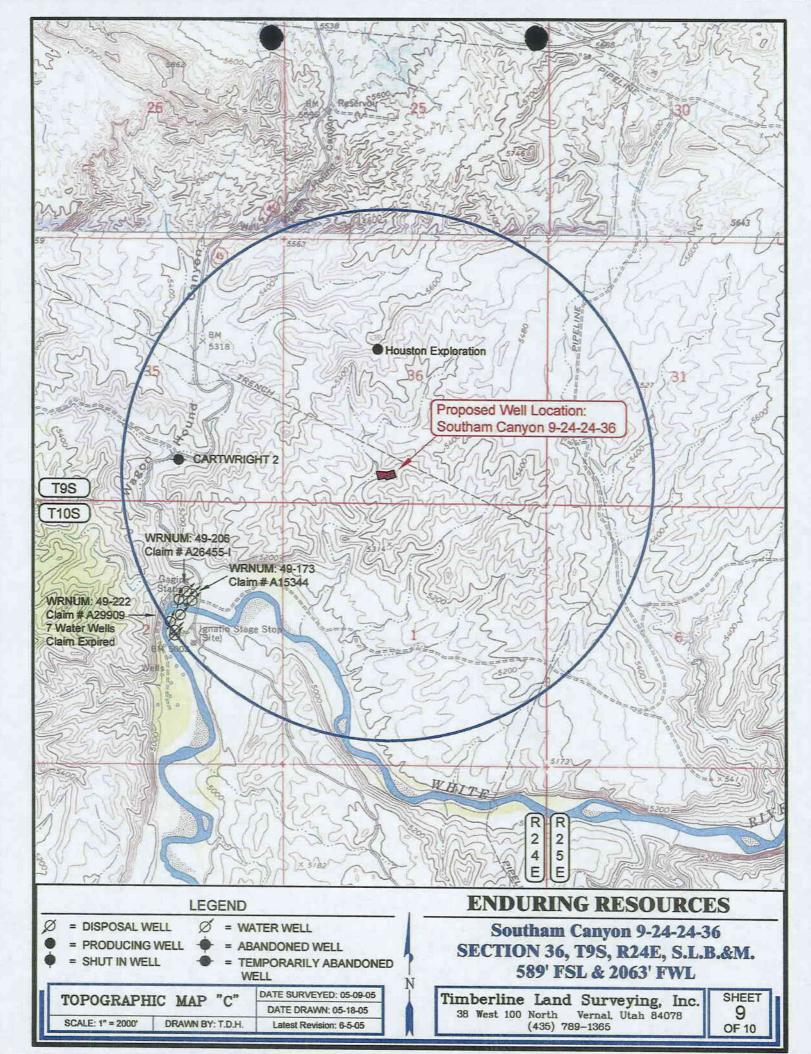
TYPICAL PRODUCTION LAYOUT - SOUTHAM CANYON 9-24-24-36

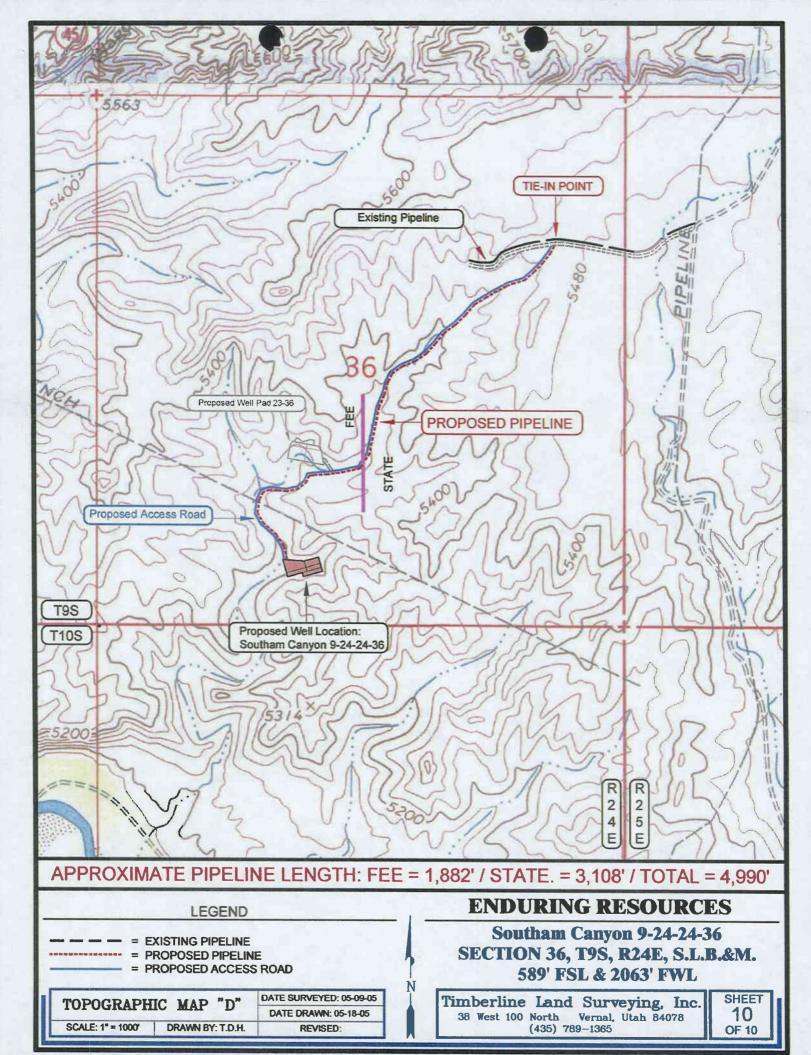


Section 36, T9S,	R24E, S.L.B.&M.	Qtr/Qtr Location: S	E SW	Footage Location:	589' FSL & 206	33' FWL
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Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	La	nd Surveying	<i>g, Inc.</i> Vernal, utah 84078	<b>O</b> F 10

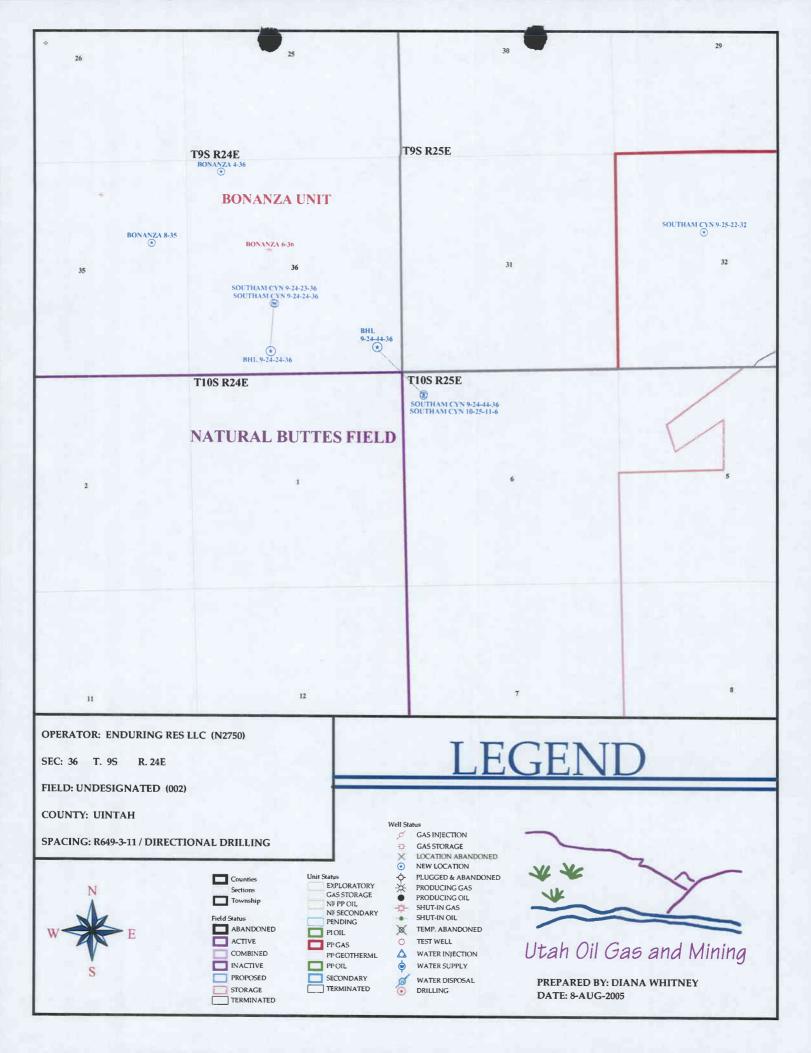








APD RECEIVED: 06/08/2005	API NO. ASSIGNE	ED: 43-047-368	379	
WELL NAME: SOUTHAM CYN 9-24-24-36  OPERATOR: ENDURING RESOURCES, LLC ( N2750 )  PHYLLIS SOBOTIK	PHONE NUMBER: 3	AMENI 03-350-5114	DED	
PROPOSED LOCATION:  NESW 36 090S 240E  SURFACE: 1772 FSL 2112 FWL  BOTTOM: 0600 FSL 1980 FWL  UINTAH  UNDESIGNATED ( 2 )  LEASE TYPE: 4 - Fee  LEASE NUMBER: FEE  SURFACE OWNER: 4 - Fee  PROPOSED FORMATION: MVRD  COALBED METHANE WELL? NO	INSPECT LOCATN  Tech Review  Engineering  Geology  Surface  LATITUDE: 39.9  LONGITUDE: -109	Initials  NRO  8997	/ Date 8/9/05	
RECEIVED AND/OR REVIEWED:  Plat Bond: Fed[] Ind[] Sta[] Fee[] (No. RLB0008031 ) Potash (Y/N)  N Oil Shale 190-5 (B) or 190-3 or 190-13  Water Permit (No. 49-2185 )  RDCC Review (Y/N) (Date: )  Fee Surf Agreement (Y/N)  Intent to Commingle (Y/N)	LOCATION AND SITING:  R649-2-3.  Unit BONANZA  R649-3-2. General			
STIPULATIONS: [- STATEMENT	tip OF BASIS			

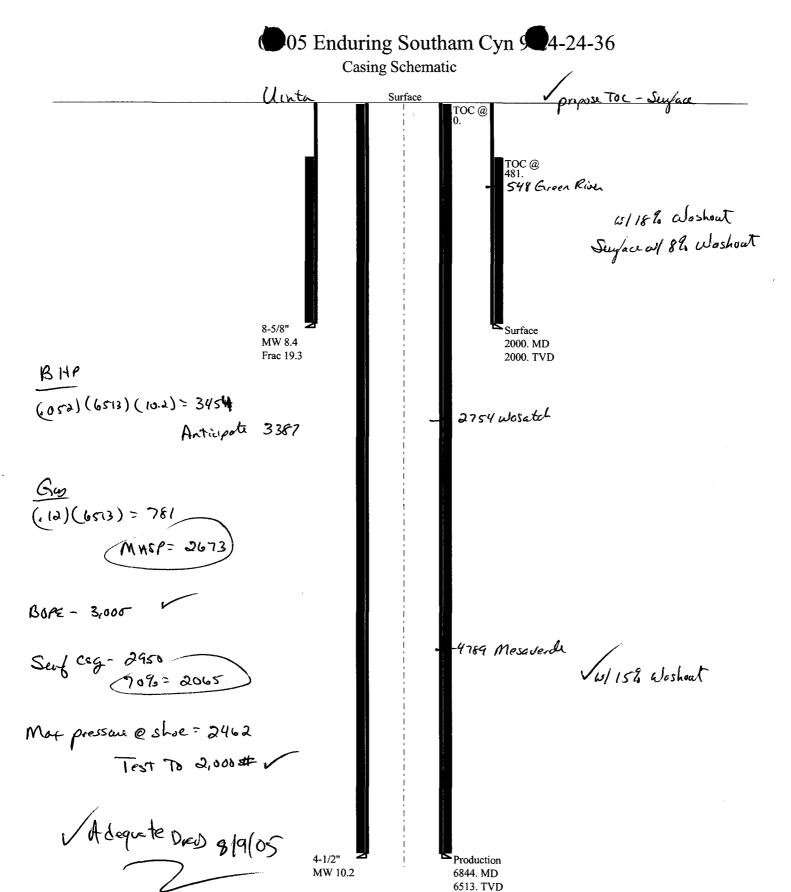


# DIVISION OF OIL, GAS AND MINING APPLICATION FOR PERMIT TO DRILL STATEMENT OF BASIS

OPERATOR:	<u>ENDURIN</u>	<u>NG RESOURCES,</u>	LLC	
WELL NAME & NUMBER	:SOUTHA	M CANYON 9-24	-24-36	
API NUMBER:	43-047-36	879		
<b>LOCATION:</b> 1/4,1/4 <u>NE/SV</u>	<u>V</u> Sec: <u>36</u> TWP: <u>98</u>	S RNG: <u>24E 2073</u>	FWL <u>1772'</u> FSL	
Geology/Ground Water:				
Enduring proposes to set 2,00	0' of surface casin	g at this location.	The depth to the base of the	e moderately
saline water at this location is	estimated to be at	a depth of 5.300'.	A search of Division of W	ater Rights
records shows 19 water wells				
by American Gilsonite and ar	e less than 50 feet	deep. They are ap	proximately 1.5 miles from	the proposed
location and are listed as bein	g used for industri	al, stock watering	and domestic use. The surf	face formation
at this site is the Uinta Forma	tion. The Uinta F	ormation is made i	ip of lenticular sandstones	interbedded
with shales and is expected to	have limited valu	e as an aquifer. T	he proposed casing and cen	nenting program
should adequately protect any	underground sour	ces of useable wat	er.	programme
Reviewer:	Brad Hill	Date:	08-15-05	
Surface:				
This well will be drilled from 9-24-23-36 surface was perfo	rmed on 6/22/05 l	by David Hackford	(copy attached). Doug Ha	ammond (Enduring
Resources) has indicated the				Comments and
stipulations will remain as wr	itten for the south	am Canyon 9-24-2	<del>3-30.</del>	
Reviewer:	Brad Hill	Date:	08-15-05	

# **Conditions of Approval/Application for Permit to Drill:**

1. A synthetic liner with a minimum thickness of 12 mils shall be properly installed and maintained in the reserve pit.



6513. TVD

Well name:

07-05 Enduring Southam Cyn 9-24-24-36

Operator:

**Enduring Resources, LLC** 

String type:

Surface

Project ID:

43-047-36879

Location:

**Uintah County** 

Design parameters:

**Collapse** 

Mud weight: Design is based on evacuated pipe.

8.400 ppg

Minimum design factors: Collapse:

Design factor 1.125 **Environment:** 

H2S considered?

Surface temperature: 75 °F Bottom hole temperature: 103 °F

Temperature gradient: Minimum section length: 1.40 °F/100ft 350 ft

Burst:

Design factor

1.00

Cement top:

481 ft

No

**Burst** 

Max anticipated surface

No backup mud specified.

pressure: Internal gradient:

1,760 psi 0.120 psi/ft

Calculated BHP

2,000 psi

**Tension:** 

8 Round STC: 1.80 (J) 8 Round LTC: 1.80 (J) 1.60 (J) **Buttress:** 

Tension is based on buoyed weight.

Premium: Body yield:

Neutral point:

1.50 (J) 1.50 (B)

1,748 ft

Re subsequent strings:

Completion type is subs

Non-directional string.

Next setting depth: 6,513 ft

Next mud weight: 10.200 ppg Next setting BHP: 3,451 psi Fracture mud wt: 19.250 ppg 2,000 ft

Fracture depth: Injection pressure

2,000 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2000	8.625	24.00	J-55	ST&C	2000	2000	7.972	96.3
Run Seq 1	Collapse Load (psi) 873	Collapse Strength (psi) 1370	Collapse Design Factor 1.570	Burst Load (psi) 2000	Burst Strength (psi) 2950	Burst Design Factor 1.47	Tension Load (Kips) 42	Tension Strength (Kips) 244	Tension Design Factor 5.82 J

Prepared

Clinton Dworshak Utah Div. of Oil & Mining Phone: 801-538-5280 FAX: 801-359-3940

Date: August 9,2005 Salt Lake City, Utah

Collapse is based on a vertical depth of 2000 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:

07-05 Enduring Southam Cyn 9-24-24-36

Operator:

**Enduring Resources, LLC** 

String type:

Production

Project ID:

43-047-36879

Location:

**Uintah County** 

Minimum design factors: **Environment:** 

**Design parameters: Collapse** 

Mud weight:

10.200 ppg

Design is based on evacuated pipe.

Collapse:

Design factor

1.125

H2S considered?

Surface temperature:

75 °F Bottom hole temperature: 166 °F

Temperature gradient: Minimum section length: 1,500 ft

1.40 °F/100ft

No

**Burst:** 

Design factor

1.00

1.80 (J)

1.80 (J)

1.60 (J)

Cement top:

Surface

**Burst** 

Max anticipated surface

pressure: Internal gradient: Calculated BHP

2,670 psi 0.120 psi/ft

3,451 psi

No backup mud specified.

**Tension:** 

8 Round STC: 8 Round LTC: **Buttress:** 

Premium:

1.50 (J) Body yield: 1.50 (B)

Completion type is subs Directional well information:

Kick-off point

0 ft Departure at shoe: 1120 ft Maximum dogleg: 6 °/100ft Inclination at shoe:

0°

Tension is based on buoyed weight. Neutral point: 5,851 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	6844	4.5	11.60	N-80	LT&C	6513	6844	3.875	158.6
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	3451	6350	1.840	3451	7780	2.25	(Kips) 64	223	3.48 J

Prepared

Clinton Dworshak Utah Div. of Oil & Mining Phone: 801-538-5280 FAX: 801-359-3940

Date: August 9,2005 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 6513 ft, a mud weight of 10.2 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

# ON-SITE PREDRILL EVALUATION Division of Oil, Gas and Mining

OPERATOR: ENDURING RESOURCES, LLC

WELL NAME & NUMBER: SOUTHAM CANYON 9-24-23-36

**API NUMBER:** 43-047-36880

LEASE: FEE FIELD/UNIT: UNDESIGNATED

LOCATION: 1/4,1/4 NE/SW Sec: 36 TWP: 98 RNG: 24E 2073' FWL 1779' FSL LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4,1/4 LINE; 920 F ANOTHER WELL. GPS COORD (UTM): 4428054N 12656758E SURFACE OWNER: AMERICAN GILSONITE COMPANY.

#### **PARTICIPANTS**

DAVID W. HACKFORD (DOGM), KOLBY KAY (TIMBERLINE SURVEYING), DOUG HAMMOND (ENDURING), TWO DIRT CONTRACTORS.

#### REGIONAL/LOCAL SETTING & TOPOGRAPHY

SITE IS IN THE BOTTOM OF A STEEP, ROCKY CANYON THAT HEADS 0.25 MILES TO THE NORTHEAST AND RUNS FOR ANOTHER ONE MILE TO THE SOUTHWEST WHERE IT ENTERS THE WHITE RIVER. THIS CANYON HAS A DRY WATERCOURSE WHICH ONLY HAS RUNNING WATER DURING SNOW MELT OR RAINSTORMS. THERE ARE NUMEROUS ROCK FACES, SHEER CLIFFS AND SANDSTONE SPIRES IN ALL DIRECTIONS. BONANZA, UTAH IS TWO MILES TO THE NORTHWEST. VERNAL, UTAH IS 42.7 MILES TO THE NORTHWEST.

#### SURFACE USE PLAN

CURRENT SURFACE USE: WILDLIFE AND LIVESTOCK GRAZING, HUNTING.

PROPOSED SURFACE DISTURBANCE: LOCATION WILL BE 365' BY 235'. ACCESS ROAD WILL BE 130 FEET.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: SEE ATTACHED MAP FROM GIS DATABASE.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: ALL PRODUCTION FACILITIES WILL BE ON LOCATION AND ADDED AFTER DRILLING WELL. PIPELINE WILL FOLLOW ACCESS ROAD.

SOURCE OF CONSTRUCTION MATERIAL: ALL CONSTRUCTION MATERIAL WILL BE BORROWED FROM SITE DURING CONSTRUCTION OF LOCATION.

ANCILLARY FACILITIES: NONE WILL BE REQUIRED.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OF CONCERNS? (EXPLAIN): UNLIKELY.

## WASTE MANAGEMENT PLAN:

DRILLED CUTTINGS WILL BE SETTLED INTO RESERVE PIT. LIQUIDS FROM PIT WILL BE ALLOWED TO EVAPORATE. FORMATION WATER WILL BE CONFINED TO STORAGE

TANKS. SEWAGE FACILITIES, STORAGE AND DISPOSAL WILL BE HANDLED BY COMMERCIAL CONTRACTOR. TRASH WILL BE CONTAINED IN TRASH BASKETS AND HAULED TO AN APPROVED LAND FILL.

#### **ENVIRONMENTAL PARAMETERS**

AFFECTED FLOODPLAINS AND/OR WETLANDS: NONE

FLORA/FAUNA: SAGEBRUSH, SPINEY HOPSAGE, GREASEWOOD, PRICKLY PEAR, CHEATGRASS, OTHER NATIVE GRASSES. DEER, RODENTS, RAPTORS, COYOTE, SONGBIRDS, RABBIT, BOBCAT, PRONGHORN.

SOIL TYPE AND CHARACTERISTICS: LIGHT BROWN SANDY CLAY.

EROSION/SEDIMENTATION/STABILITY: <u>VERY LITTLE NATURAL EROSION.</u>
SEDIMENTATION AND STABILITY ARE NOT A PROBLEM AND LOCATION CONSTRUCTION
SHOULDN'T CAUSE AN INCREASE IN STABILITY OR EROSION PROBLEMS.

PALEONTOLOGICAL POTENTIAL: NONE OBSERVED

#### RESERVE PIT

CHARACTERISTICS: 198' BY 50' AND EIGHT FEET DEEP.

LINER REQUIREMENTS (Site Ranking Form attached): A LINER WILL BE REQUIRED FOR RESERVE PIT.

## SURFACE RESTORATION/RECLAMATION PLAN

AS PER LANDOWNER AGREEMENT

SURFACE AGREEMENT: YES

CULTURAL RESOURCES/ARCHAEOLOGY: SITE IS ON FEE SURFACE.

#### OTHER OBSERVATIONS/COMMENTS

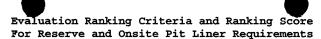
THIS PREDRILL INVESTIGATION WAS CONDUCTED ON A HOT, SUNNY DAY. THERE IS A GILSONITE VEIN IN THIS SECTION, BUT NO ACTIVE GILSONITE MINES.

#### **ATTACHMENTS**

PHOTOS OF THIS SITE WERE TAKEN AND PLACED ON FILE.

DAVID W. HACKFORD DOGM REPRESENTATIVE

6/22/05 11:30 AM DATE/TIME



Site-Specific Factors	Ranking	Site Ranking
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100 25 to 75	10 15	
<25 or recharge area	20	5
Distance to Surf. Water (feet)		<del></del>
>1000	0	
300 to 1000 200 to 300	2	
100 to 200	10 15	
< 100	20	0
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	20	0
Distance to Other Wells (feet)		
>1320	0	
300 to 1320 <300	10 20	2
1300	20	0
Native Soil Type		
Low permeability Mod. permeability	0	
High permeability	10 20	20
Fluid Type	•	
Air/mist Fresh Water	0 5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of		
hazardous constituents	20	5
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	0
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	0
Affected Populations		
<10	0	•
10 to 30 30 to 50	6 8	
>50	10	0
Presence of Nearby Utility Conduits		
Not Present	0	
Unknown	10	
Present	15	0

Final Score 30 (Level I Sensitivity)

Sensitivity Level I = 20 or more; total containment is required.

Sensitivity Level II = 15-19; lining is discretionary.

Sensitivity Level III = below 15; no specific lining is required.

## DIVISION OF OIL, GAS AND MINING APPLICATION FOR PERMIT TO DRILL STATEMENT OF BASIS

OPERATOR:	ENDURING RESOURCES, LLC
WELL NAME & NUMBER:	SOUTHAM CANYON 9-24-23-36
API NUMBER:	43-047-36880
LOCATION: 1/4,1/4 NE/SW Se	c: <u>36</u> TWP: <u>9S</u> RNG: <u>24E</u> <u>2073'</u> FWL <u>1779'</u> FSL

### **Geology/Ground Water:**

Enduring proposes to set 2,000' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 5,300'. A search of Division of Water Rights records shows 19 water wells within a 10,000 foot radius of the proposed location. The 19 wells are owned by American Gilsonite and are less than 50 feet deep. They are approximately 1.5 miles from the proposed location and are listed as being used for industrial, stock watering and domestic use. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of lenticular sandstones interbedded with shales and is expected to have limited value as an aquifer. The proposed casing and cementing program should adequately protect any underground sources of useable water.

Reviewer:	Brad Hill	Date:	06-29-05
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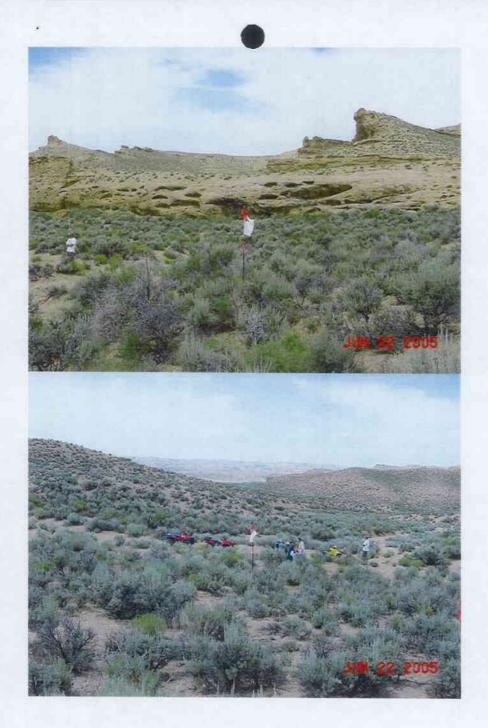
#### **Surface:**

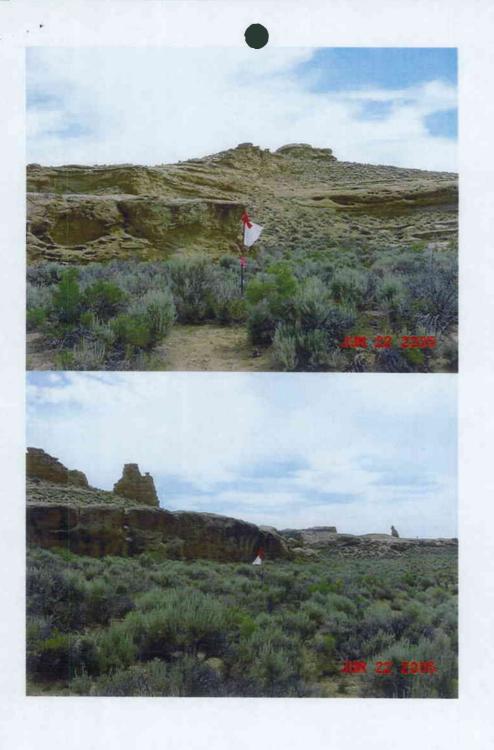
The predrill investigation of the surface was performed on 6/22/05. This site is on fee surface with fee minerals, and appears to be the best site for a location in the immediate area. I notified Mr. Jared Jackson, representative of American Gilsonite Co. on 6/14/05 at (435) 789-1921 of this investigation. He was present. He had no concerns regarding the drilling of this well or the construction of this location. American Gilsonite owns the surface at this site. This section has a gilsonite vein in it, but no active mines. A deep existing drainage crossing this site will be re-routed to the south. During location construction, rocks will be placed between this re-route and the location to protect location from washing away. Reserve pit will be constructed in an unusual shape because of a thick rock ledge which would be extremely difficult to remove.

Reviewer: <u>David W. Hackford</u> **Date**: <u>6/23/2005</u>

#### **Conditions of Approval/Application for Permit to Drill:**

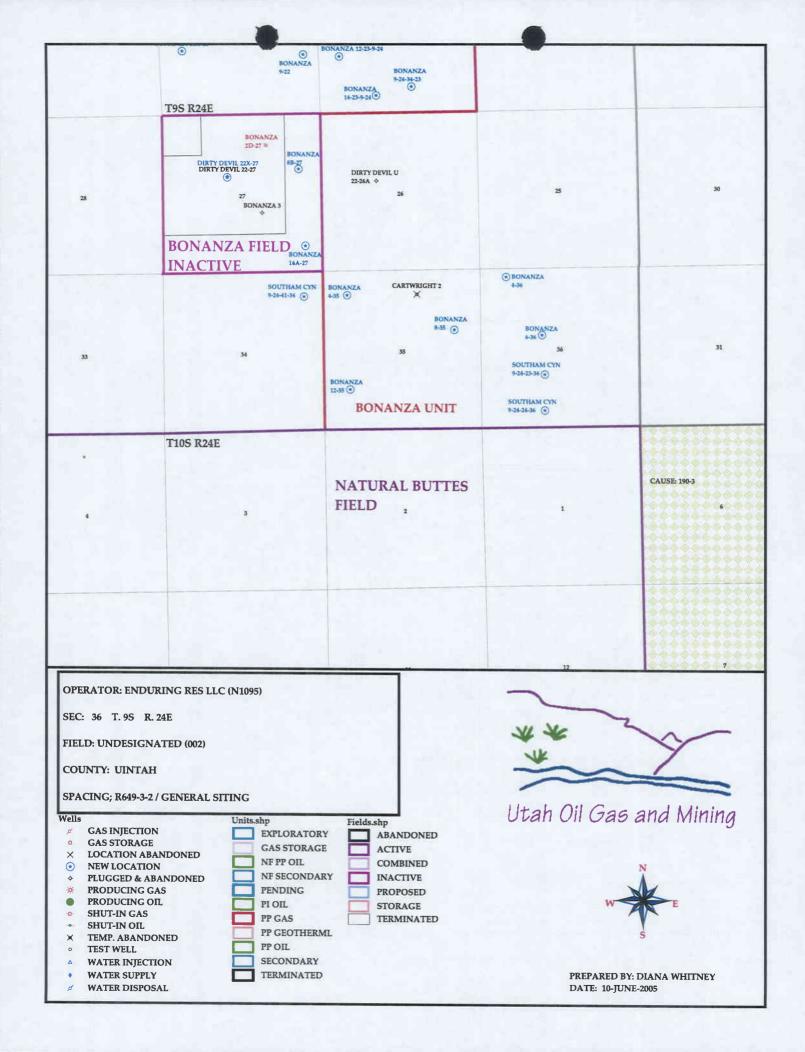
1. A synthetic liner with a minimum thickness of 12 mils shall be properly installed and maintained in the reserve pit.





APD RECEIVED: 06/08/2005	API NO. ASSIGN	ED: 43-047-3687	79
WELL NAME: SOUTHAM CYN 9-24-24-36  OPERATOR: ENDURING RESOURCES, LLC ( N2750 )  CONTACT: PHYLLIS SOBOTIK	PHONE NUMBER: 3	03-350-5114	
PROPOSED LOCATION: SESW 36 090S 240E	INSPECT LOCATN	I BY: / /	,
SURFACE: 0589 FSL 2063 FWL BOTTOM: 0589 FSL 2063 FWL	Tech Review	Initials	Date
UINTAH	Engineering	DICE	7/7/05
UNDESIGNATED ( 2 )	Geology	,	
LEASE TYPE: 4 - Fee  LEASE NUMBER: FEE	Surface		
SURFACE OWNER: 4 - Fee PROPOSED FORMATION: MVRD COALBED METHANE WELL? NO	LATITUDE: 39.9  LONGITUDE: -109	8673	
Plat  Bond: Fed[] Ind[] Sta[] Fee[]  (No. RLB0008031 )  Potash (Y/N)  Coll Shale 190-5 (B) or 190-3 or 190-13  Water Permit  (No. 49-2185 )  RDCC Review (Y/N)  (Date: )  Fee Surf Agreement (Y/N)	R649-3-3. I Drilling Uni Board Cause Eff Date: Siting:	General From Qtr/Qtr & 920. Exception it	
	Stip Tement of		

talls appearing a part



## DIVISION OF OIL, GAS AND MINING APPLICATION FOR PERMIT TO DRILL STATEMENT OF BASIS

OPERATOR:	ENDURING RESOURCES, LLC							
WELL NAME & NUMBER:	SOUTHAM CANYON 9-24-24-36							
API NUMBER:	43-047-36879							
<b>LOCATION:</b> 1/4,1/4 <u>SE/SW Sec: 36 TWP: 9S RNG: 24E 2063' FWL 589' FSL</u>								
<b>Geology/Ground Water:</b>								
E-1								

Enduring proposes to set 2,000' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 5,200'. A search of Division of Water Rights records shows 19 water wells within a 10,000 foot radius of the proposed location. The 19 wells are owned by American Gilsonite and are less than 50 feet deep. They are approximately 1 mile from the proposed location and are listed as being used for industrial, stock watering and domestic use. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of lenticular sandstones interbedded with shales and is expected to have limited value as an aquifer. The proposed casing and cementing program should adequately protect any underground sources of useable water.

Reviewer: Brad Hill Date: 06-29-05

## **Surface:**

The predrill investigation of the surface was performed on 6/22/05. This site is on fee surface with fee minerals, and appears to be the best site for a location in the immediate area. I notified Mr. Jared Jackson, representative of American Gilsonite Co. on 6/14/05 at (435) 789-1921 of this investigation. He was present. He had no concerns regarding the drilling of this well or the construction of this location. American Gilsonite owns the surface at this site. This section has a gilsonite vein in it, but no active mines. A deep existing drainage crossing this site will be re-routed to the north. During location construction, rocks will be placed between this re-route and the location to protect location from washing away. Reserve pit and location will be constructed in an unusual shape because of thick, sandstone ledges which would be extremely difficult to remove. Mr. Hammond with Enduring, and Mr. Jackson with American Gilsonite agreed at this investigation that an emergency pit would be constructed below this location on property belonging to American Gilsonite, to catch liquids in the event of an uncontrolled discharge while this well is being drilled or completed. After well is put on production, this pit will be reclaimed.

Reviewer: David W. Hackford Date: 6/23/2005

## **Conditions of Approval/Application for Permit to Drill:**

1. A synthetic liner with a minimum thickness of 12 mils shall be properly installed and maintained in the reserve pit.

# ON-SITE PREDRILL EVALUATION Division of Oil, Gas and Mining

OPERATOR: ENDURING RESOURCES, LLC

WELL NAME & NUMBER: SOUTHAM CANYON 9-24-24-36

**API NUMBER:** 43-047-36879

LEASE: FEE FIELD/UNIT: UNDESIGNATED

LOCATION: 1/4,1/4 SE/SW Sec: 36 TWP: 9S RNG: 24E 2063' FWL 589' FSL

LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4,1/4 LINE; 920 F ANOTHER WELL.

GPS COORD (UTM): 4427695N 12656763E SURFACE OWNER: AMERICAN GILSONITE COMPANY.

#### **PARTICIPANTS**

DAVID W. HACKFORD (DOGM), KOLBY KAY (TIMBERLINE SURVEYING), DOUG HAMMOND (ENDURING), TWO DIRT CONTRACTORS.

#### REGIONAL/LOCAL SETTING & TOPOGRAPHY

SITE IS IN THE BOTTOM OF A STEEP, ROCKY CANYON THAT HEADS 0.5 MILES TO THE NORTHEAST AND RUNS FOR ANOTHER 0.75 MILES TO THE SOUTHWEST WHERE IT ENTERS THE WHITE RIVER. THIS CANYON HAS A DRY WATERCOURSE, 150 FEET TO THE WEST WHICH ONLY HAS RUNNING WATER DURING SNOW MELT OR RAINSTORMS. THERE ARE NUMEROUS ROCK FACES, SHEER CLIFFS AND SANDSTONE SPIRES IN ALL DIRECTIONS. BONANZA, UTAH IS 2.25 MILES TO THE NORTHWEST. VERNAL, UTAH IS 43 MILES TO THE NORTHWEST.

#### SURFACE USE PLAN

CURRENT SURFACE USE: WILDLIFE AND LIVESTOCK GRAZING, HUNTING.

PROPOSED SURFACE DISTURBANCE: LOCATION WILL BE 365' BY 235'. ACCESS ROAD WILL BE 0.9 MILES.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: SEE ATTACHED MAP FROM GIS DATABASE.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: ALL PRODUCTION FACILITIES WILL BE ON LOCATION AND ADDED AFTER DRILLING WELL. PIPELINE WILL FOLLOW ACCESS ROAD.

SOURCE OF CONSTRUCTION MATERIAL: <u>ALL CONSTRUCTION MATERIAL WILL BE</u> BORROWED FROM SITE DURING CONSTRUCTION OF LOCATION.

ANCILLARY FACILITIES: NONE WILL BE REQUIRED.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OF CONCERNS? (EXPLAIN): UNLIKELY.

#### WASTE MANAGEMENT PLAN:

DRILLED CUTTINGS WILL BE SETTLED INTO RESERVE PIT. LIQUIDS FROM PIT WILL BE ALLOWED TO EVAPORATE. FORMATION WATER WILL BE CONFINED TO STORAGE

TANKS. SEWAGE FACILITIES, STORAGE AND DISPOSAL WILL BE HANDLED BY COMMERCIAL CONTRACTOR. TRASH WILL BE CONTAINED IN TRASH BASKETS AND HAULED TO AN APPROVED LAND FILL.

#### ENVIRONMENTAL PARAMETERS

AFFECTED FLOODPLAINS AND/OR WETLANDS: NONE

FLORA/FAUNA: SAGEBRUSH, SPINEY HOPSAGE, GREASEWOOD, PRICKLY PEAR, CHEATGRASS, OTHER NATIVE GRASSES. DEER, RODENTS, RAPTORS, COYOTE, SONGBIRDS, RABBIT, BOBCAT, PRONGHORN.

SOIL TYPE AND CHARACTERISTICS: LIGHT BROWN SANDY CLAY.

EROSION/SEDIMENTATION/STABILITY: VERY LITTLE NATURAL EROSION.

SEDIMENTATION AND STABILITY ARE NOT A PROBLEM AND LOCATION CONSTRUCTION SHOULDN'T CAUSE AN INCREASE IN STABILITY OR EROSION PROBLEMS.

PALEONTOLOGICAL POTENTIAL: NONE OBSERVED.

#### RESERVE PIT

CHARACTERISTICS: 200' BY 40' AND EIGHT FEET DEEP.

LINER REQUIREMENTS (Site Ranking Form attached): A LINER WILL BE REQUIRED FOR RESERVE PIT.

#### SURFACE RESTORATION/RECLAMATION PLAN

AS PER LANDOWNER AGREEMENT

SURFACE AGREEMENT: YES

CULTURAL RESOURCES/ARCHAEOLOGY: SITE IS ON FEE SURFACE.

## OTHER OBSERVATIONS/COMMENTS

THIS PREDRILL INVESTIGATION WAS CONDUCTED ON A HOT, SUNNY DAY. THERE IS A GILSONITE VEIN IN THIS SECTION, BUT NO ACTIVE GILSONITE MINES.

#### **ATTACHMENTS**

PHOTOS OF THIS SITE WERE TAKEN AND PLACED ON FILE.

DAVID W. HACKFORD
DOGM REPRESENTATIVE

6/22/05 11:55 AM DATE/TIME

## Everuation Ranking Criteria and Ranking Score For Reserve and Onsite Pit Liner Requirements

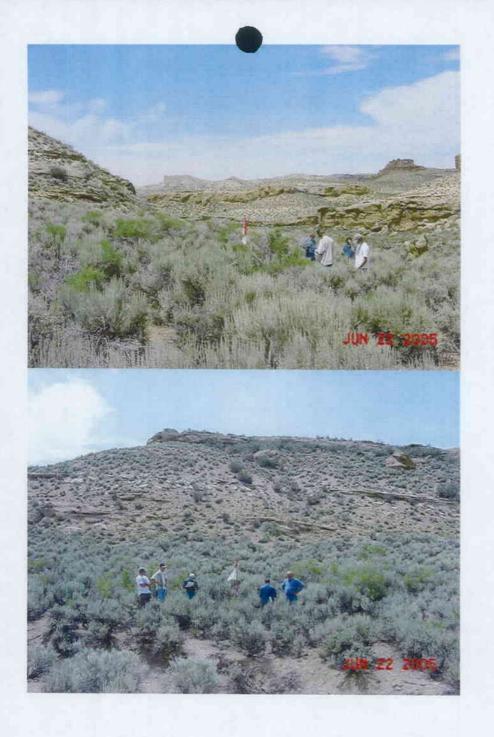
City Considir Bothern	D 1'	
Site-Specific Factors	Ranking	Site Ranking
Distance to Groundwater (feet) >200	0	
100 to 200	0 5	
75 to 100	10	
25 to 75 <25 or recharge area	15 20	5
Distance to Surf. Water (feet) >1000	0	
300 to 1000	2	
200 to 300 100 to 200	10 15	
< 100	20	0
Distance to Nearest Municipal		
Well (feet)		
>5280 1320 to 5280	0	
500 to 1320	5 10	
<500	20	0
Distance to Other Wells (feet)		
>1320	0	
300 to 1320 <300	10 20	0
Native Soil Type  Low permeability	0	
Mod. permeability	10	
High permeability	20	
Fluid Type		
Air/mist Fresh Water	0 5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of hazardous constituents	20	5
Dwill Guthiana		
Drill Cuttings Normal Rock	0	
Salt or detrimental	10	0
Annual Precipitation (inches)		
<10 10 to 20	0	
>20	5 10	0
Affected Populations		
<10	0	
10 to 30	6	
30 to 50 >50	8 10	0
Presence of Nearby Utility Conduits		<del></del>
Not Present	0	
Unknown	10	
Present	15	0

Final Score 30 (Level I Sensitivity)

Sensitivity Level I = 20 or more; total containment is required.

Sensitivity Level II = 15-19; lining is discretionary.

Sensitivity Level III = below 15; no specific lining is required.







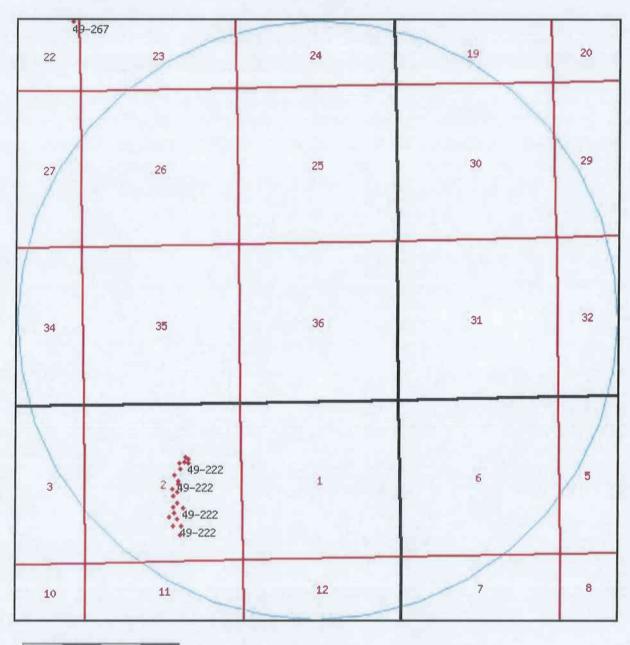


## **WRPLAT Program Output Listing**

Version: 2004.12.30.00

Rundate: 06/29/2005 03:30 PM

Radius search of 10000 feet from a point S2640 W2640 from the NE corner, section 36, Township 9S, Range 24E, SL b&m Criteria:wrtypes=W,C,E podtypes=U status=U,A,P usetypes=all



0 1300 2600 3900 5200 ft

## Water Rights

WR Number	Diversion Type/Location	Well Log	Status	Priority	Uses	CFS	ACFT	Owner Name
49-173	Underground		P	19431007	DMX	0.380	0.000	BARBER ASPHALT CORPORATION
	N758 W1825 E4 02 10S 24E SL							JENSEN UT 84035
49-206	Underground		P	19541119	D	0.015	0.000	CONOCOPHILLIPS COMPANY
	N804 W1918 E4 02 10S 24E SL							P. O. BOX 851
49-222	Underground		P	19580509	DIOS	4.300	0.000	AMERICAN GILSONITE COMPANY
	S1177 W2430 E4 02 10S 24E SL							1150 KENNECOTT BUILDING
49-222	Underground		P	19580509	DIOS	4.300	0.000	AMERICAN GILSONITE COMPANY
	N2385 W2400 SE 02 10S 24E SL							1150 KENNECOTT BUILDING
49-222	Underground		P	19580509	DIOS	4.300	0.000	AMERICAN GILSONITE COMPANY
	N1141 W2391 SE 02 10S 24E SL							1150 KENNECOTT BUILDING
49-222	Underground		P	19580509	DIOS	4.300	( )   1   1   1   1   1	AMERICAN GILSONITE COMPANY
	N1786 W2375 SE 02 10S 24E SL							1150 KENNECOTT BUILDING
49-222	Underground		P	19580509	DIOS -	4.300		AMERICAN GILSONITE COMPANY
	S486 W2297 E4 02 10S 24E SL							1150 KENNECOTT BUILDING
49-222	Underground		P	19580509	DIOS -	4.300		AMERICAN GILSONITE COMPANY

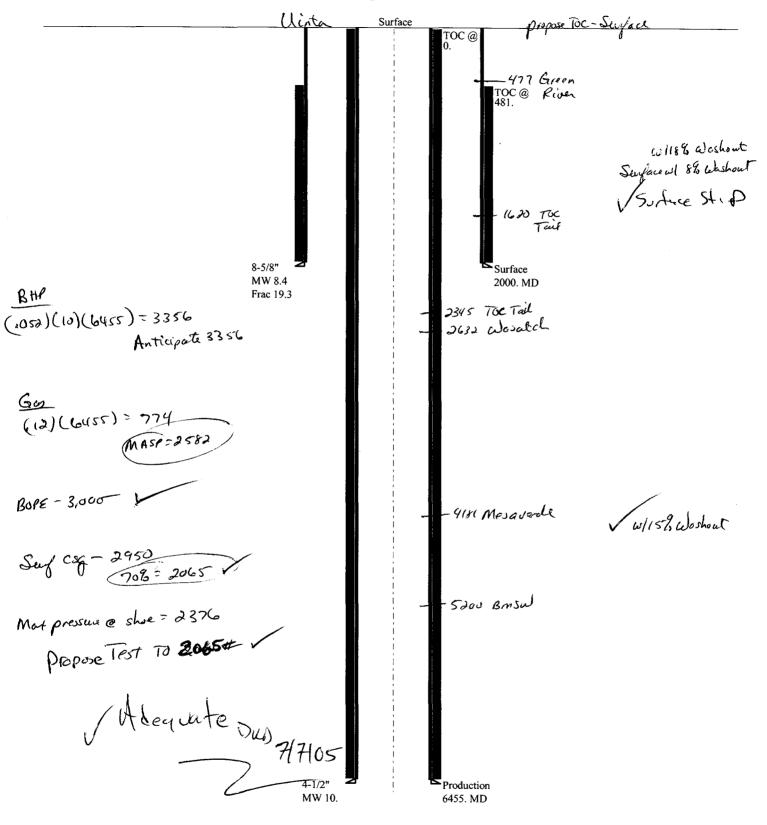
	N214 W2276 E4 02 10S			
	24E SL			1150 KENNECOTT BUILDING
<u>49-222</u>	Underground	P	19580509 DIOS 4.300 0.000	AMERICAN GILSONITE COMPANY
	S1052 W2266 E4 02 10S 24E SL			1150 KENNECOTT BUILDING
49-222	Underground	P	19580509 DIOS 4.300 0.000	AMERICAN GILSONITE COMPANY
	N1365 W2250 SE 02 10S 24E SL			1150 KENNECOTT BUILDING
49-222	Underground	P	19580509 DIOS 4.300 0.000	AMERICAN GILSONITE COMPANY
	S720 W2178 E4 02 10S 24E SL			1150 KENNECOTT BUILDING
49-222	Underground	P	19580509 DIOS 4.300 0.000	AMERICAN GILSONITE COMPANY
	S353 W2162 E4 02 10S 24E SL			1150 KENNECOTT BUILDING
49-222	Underground	P	19580509 DIOS 4.300 0.000	AMERICAN GILSONITE COMPANY
	S73 W2159 E4 02 10S 24E SL			1150 KENNECOTT BUILDING
49-222	Underground	P	19580509 DIOS 4.300 0.000	AMERICAN GILSONITE COMPANY
	N31 W2144 E4 02 10S 24E SL			1150 KENNECOTT BUILDING
49-222	Underground	P	19580509 DIOS 4.300 0.000	AMERICAN GILSONITE COMPANY
	N628 W2123 E4 02 10S 24E SL			1150 KENNECOTT BUILDING
49-222	Underground	P	19580509 DIOS 4.300 0.000	AMERICAN GILSONITE COMPANY
	N404 W2076 E4 02 10S			1150 KENNECOTT BUILDING

	24E SL					
49-222	Underground	P	19580509	DIOS	4.300 0.000	AMERICAN GILSONITE COMPANY
	N855 W2140 SE 02 10S 24E SL					1150 KENNECOTT BUILDING
49-222	Underground	P	19580509	DIOS	4.300 0.000	AMERICAN GILSONITE COMPANY
	N1140 W2100 SE 02 10S 24E SL					1150 KENNECOTT BUILDING
49-222	Underground	P	19580509	DIOS	4.300 0.000	AMERICAN GILSONITE COMPANY
	N1730 W2030 SE 02 10S 24E SL					1150 KENNECOTT BUILDING
49-222	Underground	P	19580509	DIOS	4.300 0.000	AMERICAN GILSONITE COMPANY
	N652 W1931 E4 02 10S 24E SL					1150 KENNECOTT BUILDING
49-222	Underground	P	19580509	DIOS	4.300 0.000	AMERICAN GILSONITE COMPANY
	N624 W1807 E4 02 10S 24E SL					1150 KENNECOTT BUILDING
49-267	Underground	P	1925	S	0.016 0.000	JOSEPH P. HACKING
	N2282 W262 SE 22 9S 24E SL					VERNAL UT 84078

Natural Resources | Contact | Disclaimer | Privacy Policy | Accessibility Policy

# -05 Enduring Southam Cyn 4-24-36

Casing Schematic



Well name:

07-05 Enduring Southam Cyn 9-24-24-36

Operator:

**Enduring Resources, LLC** 

String type:

Surface

Project ID:

43-047-36879

Location:

**Uintah County** 

Minimum design factors: **Environment:** 

Collapse

Mud weight: Design is based on evacuated pipe.

**Design parameters:** 

8.400 ppg

Collapse:

Design factor 1.125 H2S considered?

Surface temperature:

75 °F Bottom hole temperature: 103 °F

Temperature gradient: Minimum section length: 1.40 °F/100ft 350 ft

**Burst:** 

Design factor

1.00

1.80 (J)

Cement top:

481 ft

No

**Burst** 

Max anticipated surface

pressure:

1,760 psi

Internal gradient: 0.120 psi/ft Calculated BHP 2,000 psi

No backup mud specified.

Tension:

8 Round STC: 8 Round LTC:

1.80 (J) **Buttress:** 1.60 (J) Premium: 1.50 (J)

Body yield: 1.50 (B)

Tension is based on buoyed weight. Neutral point: 1,748 ft

Non-directional string.

Re subsequent strings:

Fracture mud wt: Fracture depth:

Injection pressure

Next setting depth: Next mud weight: Next setting BHP:

10.000 ppg 3,353 psi 19.250 ppg 2,000 ft

2,000 psi

6,455 ft

Run Segment Nominal End True Vert Measured Drift Internal Seq Length Size Weight Grade **Finish** Depth Depth Diameter Capacity (ft) (in) (lbs/ft) (ft) (ft) (in) (ft³) 2000 1 8.625 24.00 J-55 ST&C 2000 2000 7.972 96.3 Run Collapse Collapse Collapse **Burst** Burst **Burst Tension Tension Tension** Seq Load Strength Design Load Strength Design Load Strength Design (psi) (psi) **Factor** (psi) (psi) **Factor** (Kips) (Kips) **Factor** 1 873 1370 1.570 2000 2950 1.48 42 244 5.82 J

Prepared

Clinton Dworshak

Utah Div. of Oil & Mining

Phone: 801-538-5280 FAX: 801-359-3940

Date: July 1,2005 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2000 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:

07-05 Enduring Southam Cyn 9-24-24-36

Operator:

**Enduring Resources, LLC** 

String type:

Production

Project ID:

43-047-36879

Location:

**Uintah County** 

Minimum design factors:

**Environment:** 

**Collapse** 

Mud weight: Design is based on evacuated pipe.

Design parameters:

Collapse: Design factor H2S considered?

Surface temperature: Bottom hole temperature: No 75 °F

Temperature gradient: Minimum section length: 1,500 ft

165 °F 1.40 °F/100ft

**Burst:** 

Design factor

1.00 Cement top: Surface

**Burst** 

Max anticipated surface

No backup mud specified.

pressure: Internal gradient:

Calculated BHP

2,579 psi

10.000 ppg

0.120 psi/ft 3,353 psi

**Tension:** 

1.80 (J) 8 Round STC: 1.80 (J)

1.125

8 Round LTC: Buttress: 1.60 (J) Premium: 1.50 (J)

Body yield: 1.50 (B)

Tension is based on buoyed weight. Neutral point: 5.490 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	6455	4.5	11.60	N-80	LT&C	6455	6455	3.875	149.6
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength	Burst Design	Tension Load	Tension Strength	Tension Design
1	3353	6350	1.894	3353	<b>(psi)</b> 7780	Factor 2.32	(Kips) 64	( <b>Kips)</b> 223	Factor 3.50 J

Prepared

Clinton Dworshak

Utah Div. of Oil & Mining

Phone: 801-538-5280

FAX: 801-359-3940

Date: July 1,2005 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 6455 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.



State of Utah

Department of Natural Resources

MICHAEL R. STYLER Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA Division Director JON M. HUNTSMAN, JR. Governor

GARY R. HERBERT Lieutenant Governor

July 11, 2005

Enduring Resources, LLC 475 17th St., Suite 1500 Denver, CO 80202

Re:

Southham Canyon 9-24-24-36 Well, 589' FSL, 2063' FWL, SE SW, Sec. 36,

T. 9 South, R. 24 East, Uintah County, Utah

#### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-36879.

Sincerely,

Gil Hunt

**Acting Associate Director** 

pab Enclosures

cc:

**Uintah County Assessor** 

Bureau of Land Management, Vernal District Office

Operator:	Enduring Resources, LLC							
Well Name & Number Southham Canyon 9-24-24-36								
API Number:								
Lease:	Fee							
Location: <u>SE SW</u>	Sec. 36	T. 9 South	R. 24 East					

## **Conditions of Approval**

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

## 2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

## 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)
- 5. Surface casing shall be cemented to the surface.

Page 2 API #43-047-36879 July 11, 2005

6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.



### Enduring Resources

475 17<sup>th</sup> Street Suite 1500 Denver Colorado 80202 Telephone 303 573-1222 Fax 303 573 0461

August 3, 2005

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210 P. O. Box 145801 Salt Lake City, Utah 84114-5801

Attn.: Ms. Diana Whitney

RE: Southam Canyon #9-24-24-36

API # 43-047-36879

SL: NESW Sec. 36 T9S-R24E BHL: SESW Sec. 36 T9S-R24E

Uintah County, Utah

Dear Ms. Whitney:

Enclosed are two original amended applications to drill concerning the referenced proposed well. The highlighted data is the data which has changed from the initial filing. Only those plats containing changes are included.

This well was initially permitted as a vertical well with the approved application to drill being dated July 11, 2005. Due to cultural constraints, the vertical location has been abandoned. No construction activity occurred on the initial well site.

Enduring Resources, LLC is requesting the Utah Division of Oil, Gas and Mining to hold this application and all future information as confidential.

If any questions arise or additional information is required, please contact me at 303-350-5114.

Sincerely,

Phyllis Sobotik

Regulatory Specialist

RECEIVED

AUG 0 4 2005

/ps

**Enclosures:** 

American Gilsonite Co. 29950 S. Bonanza Hwy.

Bonanza, Utah 84008 Attn.: Mr. Jared Jackson DIV. OF OIL, GAS & MANUES



475 17<sup>τt</sup> Street Suite 1500 Denver Colorado 80202 Telephone 303 573-1222 Fax 303 573 0461

August 3, 2005

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210 P. O. Box 145801 Salt Lake City, Utah 84114-5801

Attn.: Ms. Diana Whitney

RE: Southam Canyon #9-24-24-36

SL: NESW 1772' FSL 2112' FWL BHL: SESW 660' FSL 1980' FWL

Sec 36 T9S-R24E Uintah County, Utah

Dear Ms. Whitney:

Enduring Resources, LLC (Enduring) is submitting an Amended Application for Permit to Drill dated August 3, 2005 concerning the referenced well. Enduring is submitting this letter in accordance with UT Administrative Code R649-3-11 Directional Drilling.

- \* Enduring located at 475 17th Street, Suite 1500 Denver, CO 80202 is the operator of the referenced proposed well.
- \* Due to cultural constraints, Enduring abandoned the originally permitted vertical location; approved APD is dated July 11, 2005. Therefore, this well is now proposed to be drilled as a directional well to reach the desired bottomhole. Surface disturbance will be minimized by eliminating the construction of another location, access road and pipeline.
- \* Enduring hereby certifies that it is the sole working interest owner within a 460 foot radius of the entire proposed directional wellbore. Enduring is the only lease owner for the N/2SW/4 SESW/4 and S/2SE/4 Section 36 T9S R24E.

The signature below signifies Enduring Resources, LLC written consent to UT Administrative Code R649-3-11.

Signature:

Name: Phyllis Sobotik

Title: Regulatory Specialist

Date: August 3, 2005

RECEIVED

AUG 0 4 2005

DIV. OF OIL, GAS & MERRICA

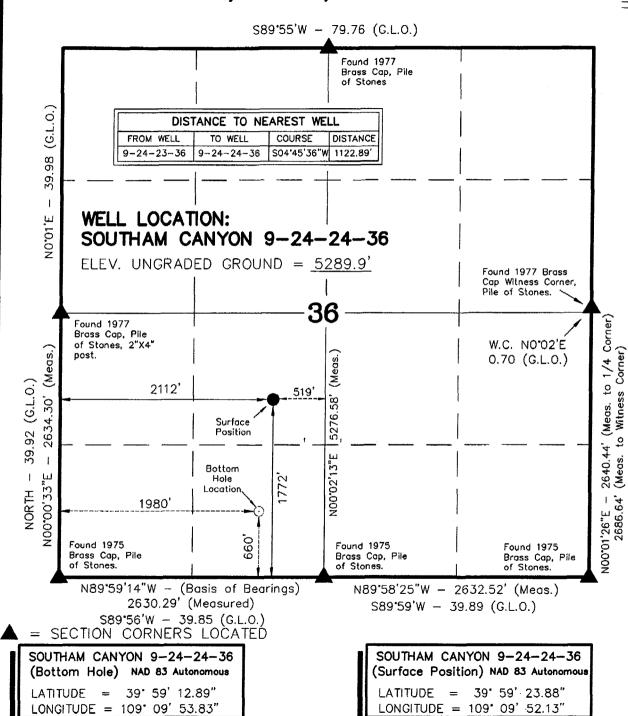
FORM 3

AMENDED REPORT 🗾 (highlight changes)

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

							5. MINERAL LEASE Fee	NO:	6. SURFACE: Fee	
1A. TYPE OF WO	DRK: DF	RILL 🔽	REENTER [	DEEF	PEN			7. IF INDIAN, ALLOT	TEE OR T	RIBE NAME:
B. TYPE OF WE	ILL: OIL	GAS 🗹	OTHER		SIN	GLE ZONE 🔽 MULTIPLE ZON	E	8. UNIT, or CA AGRE	EMENT N	
2. NAME OF OPE	* **							9. WELL NAME and		
3. ADDRESS OF	Resources, L	LC						Southam Ca		
475 17th S	t, Suite 1500			ATE CO ZIF				10. FIELD AND POO Undesignate	ed	
4. LOCATION OF AT SURFACE:	1772' FSL	2112' FW	65677 L Sec 36 T9:	2 X 44 S R24E S.	28. L.B.	0494 39.989974 &M1001, 271-	7	11. QTR/QTR, SECT MERIDIAN:		
AT PROPOSED	PRODUCING ZON	E SESW	600' FSL	980' FWL	S.L	B.&M.		NESW 36	198	6 24E
14. DISTANCE IN	MILES AND DIREC	CTION FROM NE	8 X 44276 AREST TOWN OR P	OST OFFICE:	1, 7	86761 -109.16424	7_	12, COUNTY:		13. STATE:
43 miles	Southeaste	rly from Ve	ernal, Utah					Uintah		UTAH
	O NEAREST PROPI	ERTY OR LEASE	LINE (FEET)	16. NUME	BER OF	FACRES IN LEASE:	17. N	UMBER OF ACRES AS	SIGNED	TO THIS WELL:
519' SL 6						2403.9				40
	O NEAREST WELL R) ON THIS LEASE		IPLETED, OR	19. PROF	POSED	DEPTH:	20. B	OND DESCRIPTION:		
1122.89'						6,844	R	LB0008031		
21. ELEVATIONS	(SHOW WHETHER	R DF, RT, GR, ET	rC.):	22. APPR	ROXIMA	ATE DATE WORK WILL START:	23. E	STIMATED DURATION	i:	
5289.9' G	R Ungraded	i ————		10/1	5/20	005	20	days		
24.			PROPO	SED CASIN	IG AI	ND CEMENTING PROGRAM				
SIZE OF HOLE	CASING SIZE, O	GRADE, AND WE	IGHT PER FOOT	SETTING DEP	TH	CEMENT TYPE, QUA	ANTITY	, YIELD, AND SLURRY	WEIGHT	
12-1/4"	8-5/8"	J-55	24#	2,0	000	65/35 Poz	4	62 sx	1.81	12.6 ppg
						Prem	2	236 sx	1.18	15.6 ppg
7-7/8"	4-1/2"	N-80/I-80	11.6#	6,8	844	Prem Lite II	3	312 sx	3.38	11.0 ppg
-						50/50 Poz CI G	11	11 sx	1.31	14.3 ppg
25.			·	۸.		CUMENTO				
	LOWNG ARE ATT	ACHED IN ACCC	ORDANCE WITH THE	<del></del>		CHMENTS  ONSERVATION GENERAL RULES:				
		NONES IN AGO	MOANOE WITH THE	OTATI OIL AND	avê cı	ONSERVATION GENERAL ROLES.				
✓ WELL PL	AT OR MAP PREPA	ARED BY LICENS	SED SURVEYOR OR	ENGINEER		COMPLETE DRILLING PLAN				
<b>Z</b> EVIDENC	CE OF DIVISION OF	WATER RIGHTS	S APPROVAL FOR U	SE OF WATER		FORM 5, IF OPERATOR IS PE	RSON	OR COMPANY OTHER	THAN TH	E LEASE OWNER
		<u> </u>				1				
NAME (PLEASE	PRINT) Phyllis	Sobotik	<del></del>			TITLE Regulatory Sp	ecial	ist		
SIGNATURE	Pylla.	Sobor	the			DATE (Mg 3)	m	ひー		
(This space for Sta	te ase only)			Maria Marija na sam						
	21.3	2-2-1-	a , c -1A	U	ltah	Division of				
API NUMBER AS	SIGNED: 43	3-047-	368/9		. <b>G</b> a V2-	as and Mining AUG (	4 3	005		
				Date	75	CO THOMOSOLO	AS A	MARKIN		

## T9S, R24E, S.L.B.&M.



## ENDURING RESOURCES

WELL LOCATION, SOUTHAM CANYON 9-24-24-36, LOCATED AS SHOWN IN THE SE 1/4 SW 1/4 OF SECTION 36, T9S, R24E, S.L.B.&M. UINTAH COUNTY, UTAH.

#### NOTES:

- 1. Well footages are measured at right angles to the Section Lines.
- 2. Bearings are based on Global Positioning Satellite observations.
- 3. The Bottom of hole bears S06'47'53"W 1119.86' from the surface position.
- 4. Basis of Elevation is Triagulation Station JEK 9 ET (1966) located in the NW 1/4 of Section 32, T9S, R25E, S.L.B.&M. The elevation of this bench mark is shown on the Southam Canyon 7.5 min. Quadrangle as being 5729'.

THIS IS TO CERTIFY THAT THE ABOVE THAT WAS PREPARED FROM FIELD NOTES OF A TWAL SURVEYS MADE BY ME OR UNDER MY SUPERMEND WIND THAT THE SAME ARE TRUE AND CORRECT TO THE REST OF MY KNOWLEDGE AND BELLET NO.362251

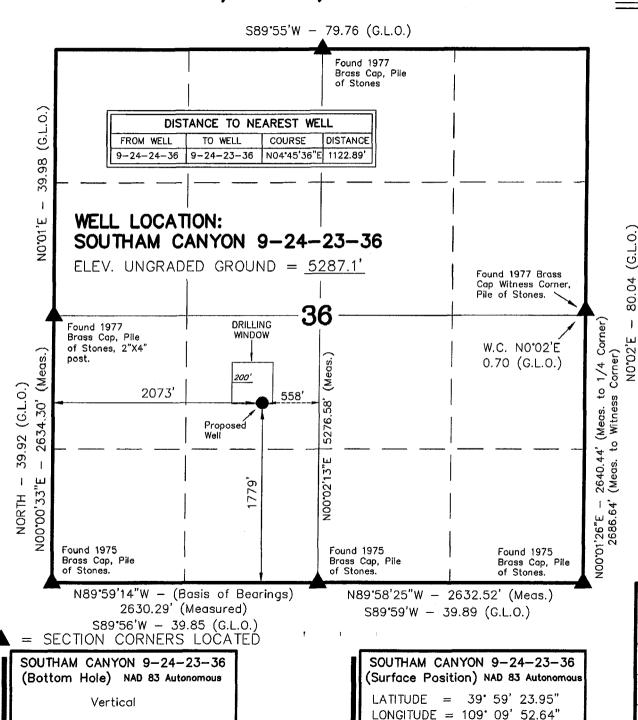
REGISTRED LAND SURVEYOR REGISTRATION NO 35 76 5 5 5 1 STATE OF UTAH

## TIMBERLINE LAND SURVEYING, INC.

38 WEST 100 NORTH. - VERNAL, UTAH 84078 (435) 789-1365

<b>■</b>		
DATE SURVEYED: 5-9-05	SURVEYED BY: K.R.K.	SHEE
DATE DRAWN: 5-16-05	DRAWN BY: C.B.T.	2b
SCALE: 1" = 1000'	Date Last Revised: 6-30-05	OF 11

## T9S, R24E, S.L.B.&M.



## ENDURING RESOURCES

WELL LOCATION, SOUTHAM CANYON 9-24-23-36, LOCATED AS SHOWN IN THE NE 1/4 SW 1/4 OF SECTION 36, T9S, R24E, S.L.B.&M. UINTAH COUNTY, UTAH.

#### NOTES:

- 1. Well footages are measured at right angles to the Section Lines.
- 2. Bearings are based on Global Positioning Satellite observations.
- 3. Basis of Elevation is Triagulation Station JEK 9 ET (1966) located in the NW 1/4 of Section 32, T9S, R25E, S.L.B.&M. The elevation of this bench mark is shown on the Southam Canyon 7.5 min. Quadrangle as being 5729'.

THIS IS TO CERTIFY THAT THE ACCOUNT OF THE ACCOUNT

REGISTERED LAND SUPPEMOR REGISTRATION NO STATE OF UTAH

## TIMBERLINE LAND SURVEYING, INC.

38 WEST 100 NORTH. - VERNAL, UTAH 84078 (435) 789-1365

SHEET

2a

**OF 11** 

DATE SURVEYED: 5-9-05	SURVEYED BY: K.R.K.
DATE DRAWN: 5-16-05	DRAWN BY: C.B.T.
SCALE: 1" = 1000'	Date Last Revised:

Enduring Resources, LLC Southam Canyon #9-24-24-36 Surf: NESW Sec. 36 T9S-R24E BHL: SESW Sec. 36 T9S-R24E Uintah County, Utah Lease # Fee

## **ONSHORE ORDER 1 - DRILLING PLAN**

#### 1. <u>Estimated Tops of Geological Markers:</u>

<u>Formation</u>	Depth (MD)	Depth (TVD)
Uinta	Surface	Surface
Green River	548'	548'
Wasatch	2754'	2682'
Mesaverde	4789'	4458'

## 2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals: (5295.8' estimated KB)

Substance	Formation	Depth (MD)	Depth (TVD)
	Uinta	Surface	Surface
Oil / Gas	Green River	548'	548'
Oil /Gas	Wasatch	2754'	2682'
Oil /Gas	Mesaverde	4789'	4458'
	Estimated TD	6844'	6513'

A 12-1/4" hole will be drilled to approximately 2000 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set.

## 3. Pressure Control Equipment: (3000 psi schematic attached)

A. Type:

Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer with 3,000 psi Casinghead and 3,000 psi Tubinghead equipped per the attached diagrams for 3,000 psi. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, Stroke Counter and flow sensor will be installed to check for flow and monitor pit volume.

B. Pressure Rating: 3,000 psi BOPE

C. Kelly will be equipped with upper and lower Kelly valves.

## D. Testing Procedure: <u>Annular Preventer</u>

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

#### **Blow-Out Preventer**

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

#### D. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

Totco directional surveys will be dropped every 2000 feet. Maximum allowable angle is 5 degrees.

#### 4. Proposed Casing & Cementing Program:

## A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set-MD
			1		(TVD)
20"	16"				40'
12-1/4"	8-5/8"	24#	J-55	ST&C	0 -2,000' est (2,000')
7-7/8"	4-1/2"	11.6#	N-80/I-80	LT&C	0 – 6844' (6513')

The surface casing will have guide shoe, 1 jt., insert float collar. Centralize the first 3 joints with bowspring centralizers. Thread lock guide shoe.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

## B. Casing Design Parameters:

Depth-MD (TVD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40	16"			
2000 (2000)	8-5/8", 24#/ft, J55, STC	1370/1.53(a)	4460/4.98(b)	244/5.08(c)
6844 (6513)	4-1/2", 11.6#/ft, N-80, LTC	6350/1.89 (d)	7780/2.52 (e)	223/3.43 (f)

- (a.) based on full evacuation with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud

- (d.) based on full evacuation with 10.0 ppg fluid on annulus, pipe evacuated
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient.
- (f.) based on casing string weight in 9.2 ppg mud

#### PROPOSED CEMENTING PROGRAM

#### Surface Casing (if well will circulate)-Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1500	65/35 POZ +6% Gel +10 pps gilsonite + .25 pps Flocele + 3% salt BWOW	462	35%	12.6	1.81
8-5/8"	Tail	500	Premium cmt +2% CaCl +.25 pps flocele	236	35%	15.6	1.18

A cement top job is required if cement fallback is greater than 10' below ground level. Top job cement will be premium cement w/2% CaCl. Volume as required.

#### Surface Casing (if well will not circulate)-Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	500	Premium cmt + 2% CaCl +.25 pps flocele	280	60	15.6	1.18
8-5/8"	Top job	As req.	Premium cement + 2% CaCl	Req.		15.6	1.18

#### Production Casing and Liner-Cemented TD to Surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft³/sx)
4-1/2"	Lead	2744	Premium Lite II +3% KCL +0.25 pps celloflake +5 pps gilsonite +10% gel +0.5% extender	312	60	11.0	3.38
4-1/2"	Tail	4100	50/50 POZ Class G +10% salt + 2% gel + 1% R-3	1111	60	14.3	1.31

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to surface. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

#### 5. **Drilling Fluids (mud) Program:**

Int	erval - MD	Interval-TVD	Mud Weight	Fluid Loss	Viscosity	Mud Type
0	0'-2000'	0'-2000'		No cntrl		Air/mist
20	000'-3000'	2000'-2873'	8.4-8.6	No entrl	28-36	Water
30	000'-6844'	2873'-6513'	8.8-10.2	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

#### 6. **Evaluation Program:**

Tests: No tests are currently planned.

Coring: No cores are currently planned.

Samples: None

<u>Logging</u>: Dual Induction – SFL /Gamma Ray Caliper:

TD to Base Surface Casing

Compensated Neutron/Litho Density Temperature/Gamma Ray: TD to Base Surface Casing Cement Bond Log / Gamma Ray:

PBTD to Top of Cement

Stimulation:

A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate

all completion activities.

#### 7. **Abnormal Conditions:**

No abnormal temperatures or pressures are anticipated. No H2S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 3387 psi (calculated at 0.52 max psi/foot of hole) and maximum anticipated surface pressure equals approximately 1954 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

#### 8. **Anticipated Starting Dates:**

Anticipated Commencement Date-

October 15, 2005

**Drilling Days-**

Approximately 10 days

Completion Days -

Approximately 10 days

Anticipate location construction within 30 days of permit issue.

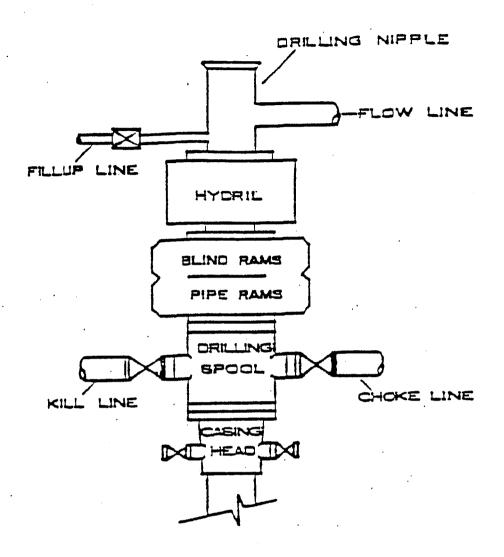
#### 9. Variances:

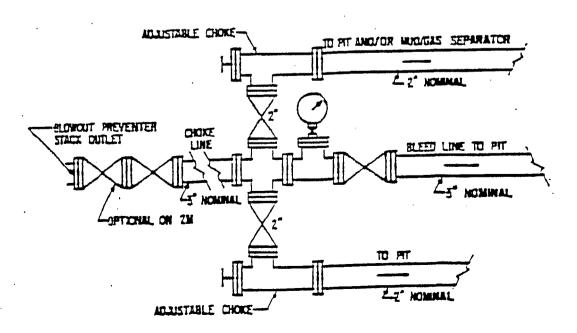
None anticipated

#### 10. Other:

Directional Drilling Plan: Attached is the proposed directional drilling plan for the Southam Canyon #9-24-24-36 well.

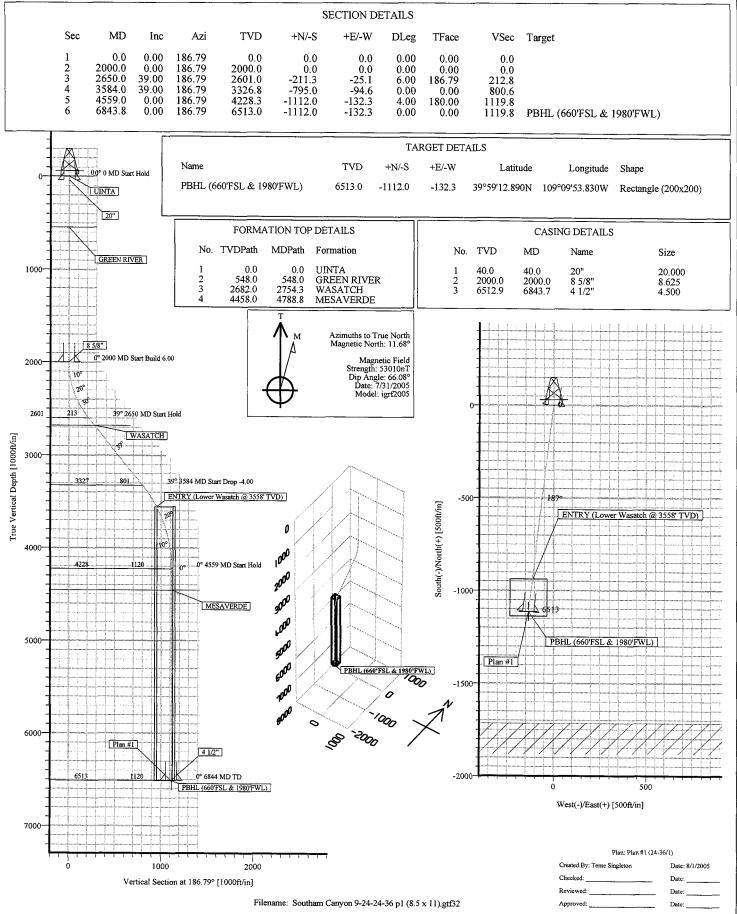
## EOP STACK





## ENDURING RESOURCES LLC. SOUTHAM CANYON 9-24-24-36





## Weatherford Directional Services **Planning Report**

Company: Enduring Resources Field: Uintah Basin (NAD 83)

Southam Canyon 9-24-24-36

Well: 24-36 Wellpath:

Date: 8/1/2005

Time: 07:20:06

Page:

Co-ordinate(NE) Reference: Site: Southam Canyon 9-24-24-36

Vertical (TVD) Reference: KB 5295.8 Section (VS) Reference:

Well (0.00N, 0.00E, 186.79Azi)

Plan:

Plan #1

Field:

Site:

Uintah Basin (NAD 83) Unitah County, Utah

USA

Map System: US State Plane Coordinate System 1983

Geo Datum: GRS 1980 Sys Datum: Mean Sea Level Map Zone:

Utah, Central Zone

Coordinate System: Geomagnetic Model: Site Centre igrf2005

Site:

Southam Canyon 9-24-24-36

Unitah County, Utah

NE 1/4 of SW1/4 Sect. 36 T9S R24E

Site Position: From:

Northing:

Latitude:

Lease Line

Easting:

Longitude: North Reference:

Slot Name:

True

Position Uncertainty: Ground Level:

0.0 ft 0.0 ft

Grid Convergence:

1.50 deg

Well: 24-36

Well Position:

Wellpath:

Plan:

Principal:

+N/-S +E/-W 0.0 ft Northing: 0.0 ft Easting:

2186521.22 m Latitude: 699426.08 m

59 23.880 N

Longitude:

109 9 52.130 W

**Position Uncertainty:** 

**Current Datum:** 

Magnetic Data:

0.0 ft

**Drilled From:** Tie-on Depth: Surface 0.0 ft

0.0

Height 5295.8 ft 7/31/2005

Above System Datum: Declination: Mag Dip Angle: +E/-W

Mean Sea Level 11.68 deg 66.08 deg

Field Strength: 53010 nT Vertical Section: Depth From (TVD)

Plan #1

Yes

KB

+N/-S fţ 0.0

ft

Direction deg

186.79 0.0

Date Composed:

7/31/2005

Version:

Tied-to:

From Surface

#### Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100fl	Turn deg/100ft	TFO deg	Target
0.0	0.00	186.79	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2000.0	0.00	186.79	2000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2650.0	39.00	186.79	2601.0	-211.3	-25.1	6.00	6.00	0.00	186.79	
3584.0	39.00	186.79	3326.8	-795.0	-94.6	0.00	0.00	0.00	0.00	
4559.0	0.00	186.79	4228.3	-1112.0	-132.3	4.00	-4.00	0.00	180.00	
6843.8	0.00	186.79	6513.0	-1112.0	-132.3	0.00	0.00	0.00	0.00	PBHL (660'FSL & 1980'FWL)

#### Section 1: Start Hold

MID ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.0	0.00	186.79	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
40.0	0.00	186.79	40.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
100.0	0.00	186.79	100.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
200.0	0.00	186.79	200.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
300.0	0.00	186.79	300.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
400.0	0.00	186.79	400.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
500.0	0.00	186.79	500.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
548.0	0.00	186.79	548.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
600.0	0.00	186.79	600.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
700.0	0.00	186.79	700.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
800.0	0.00	186.79	800.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
900.0	0.00	186.79	900.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
1000.0	0.00	186.79	1000.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
1100.0	0.00	186.79	1100.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
1200.0	0.00	186.79	1200.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
1300.0	0.00	186.79	1300.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
1400.0	0.00	186.79	1400.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79
1500.0	0.00	186.79	1500.0	0.0	0.0	0.0	0.00	0.00	0.00	186.79

# Weatherford Directional Services

## **Planning Report**

Company: Enduring Resources Date: 8/1/2005 Time: 07:20:06 Page: Field: Uintah Basin (NAD 83) Co-ordinate(NE) Reference: Site: Southam Canyon 9-24-24-36 Site: Southam Canyon 9-24-24-36 Vertical (TVD) Reference: KB 5295.8 Well: 24-36 Section (VS) Reference: Well (0.00N, 0.00E, 186.79Azi) Wellpath: Plan: Plan #1 1 : Start Hold Section MD Incl Azim TVD +N/-S+E/-W VS DLS Build Turn TFO ft deg deg ft ft ft deg/100ft deg/100ft deg/100ft deg 1600.0 0.00 186.79 1600.0 0.0 0.0 0.0 0.00 0.00 0.00 186.79 1700.0 0.00 186.79 1700.0 0.0 0.0 0.0 0.00 0.00 0.00 186.79 1800.0 0.00 186.79 1800.0 0.0 0.0 0.0 0.00 0.00 0.00 186.79 1900.0 0.00 186.79 1900.0 0.0 0.0 0.0 0.00 0.00 0.00 186.79 2000.0 0.00 186.79 2000.0 0.0 0.0 0.0 0.00 0.00 0.00 186.79 2: Start Build 6.00 Section MD Incl Azim TVD +N/-S +E/-W VS DLS Build TFO ft deg deg ft ft ft deg/100ft deg/100ft deg/100ft deg 2050.0 3.00 186.79 2050.0 -1.3-0.21.3 6.00 6.00 0.00 0.00 2100.0 6.00 186.79 2099.8 -5.2 -0.6 5.2 6.00 6.00 0.00 0.00 2150.0 9.00 186.79 2149.4 -11.7-1.4 11.8 6.00 6.00 0.00 0.00 2200.0 12.00 186.79 2198.5 -20.7-2.5 20.9 6.00 6.00 0.00 0.00 2250.0 15.00 186.79 2247.2 -32.3 -3.8 32.5 6.00 6.00 0.00 0.00 2300.0 18.00 186.79 2295.1 -46 4 -5.5 467 6.00 6.00 0.00 0.00 2350.0 21.00 -63.0 186.79 2342.2 -7.5 63.4 6.00 6.00 0.00 0.00 2400.0 24.00 186.79 2388.4 -82.0 -9.8 82.6 6.00 6.00 0.000.00 2450.0 27.00 186.79 2433.5 -103.4-12.36.00 104.1 6.00 0.00 0.00 2500.0 30.00 186.79 2477 5 -127.0-15.1 127.9 6.00 6.00 0.00 0.00 2550.0 33.00 186.79 2520.1 -153.0 -18.2 154.1 6.00 6.00 0.00 0.00 2600.0 36.00 186.79 2561.3 -181.1 -21.5 182.4 6.00 6.00 0.00 0.00 2650.0 39.00 186.79 2601.0 -25.1 -211.3 212.8 6.00 6.00 0.00 0.00 3: Start Hold Section MD Incl Azim TVD +N/-S +E/-W VS DLS Build Turn TFO deg ft ft ft ft deg/100ft deg/100ft deg/100ft deg 2700.0 39.00 186.79 2639.8 -242.6 -28.9 244.3 0.00 0.00 0.00 0.00 2754.3 39.00 186.79 2682.0 -276.5-32.9 278.4 0.00 0.00 0.00 0.00 2800.0 39.00 186.79 2717.5 -305.1 -36.3 307.2 0.00 0.00 0.00 0.00 2900.0 39.00 186.79 2795.2 -367.5-43.7370.1 0.00 0.00 0.00 0.00 3000.0 39.00 186.79 2873.0 -430.0-51.2 433.1 0.00 0.00 0.00 0.00 3100.0 39.00 186.79 2950.7 -492.5-58.6 496.0 0.00 0.00 0.00 0.00 3200.0 39.00 186.79 3028.4 -555.0 -66.0 558.9 0.00 0.00 0.00 0.00 3300.0 39.00 186.79 3106.1 -617.5 -73.5 621.9 0.00 0.00 0.00 0.00 3400.0 39.00 186.79 3183.8 -680.0-80.9 684.8 0.00 0.00 0.00 0.00 3500.0 39.00 186.79 3261.5 -742.5 -88.3 747.7 0.00 0.00 0.00 0.00 0.00 3584.0 39.00 186.79 3326.8 -795.0 -94.6 800.6 0.00 0.00 0.00 Section 4 : Start Drop -4.00 MD Incl Azim TVD +N/-S +E/-W VS DLS Build TFO Turn ft deg deg ft ft deg/100ft deg/100ft deg/100ft ft ft deq 3600.0 38.36 186.79 3339.3 -804.9 -95.8 810.6 4.00 -4.00 0.00 -180.00 3700.0 34.36 186.79 3419.8 -863.8 -102.8 869.9 4.00 -4.00 0.00 180.00 3800.0 30.36 3504.3 -916.9 186.79 -109.1923.4 4.00 -4.00180.00 0.00 3861.5 27.90 186.79 3558.0 -946.6 -112.6 953.3 4.00 -4.00 0.00 -180.00 3900.0 26.36 186.79 3592.2 -964.1 -114.7970.9 4.00 -4.00 0.00 180.00 4000.0 22.36 3683.3 186.79 -1005.0 -119.61012.1 4.00 -4.000.00 180.00 4100.0 18.36 186.79 3777.1 -1039.6 -123.71046.9 4.00 -4.00 0.00 180.00 4200.0 14.36 186.79 3873.0 -1067.5 -127.01075.1 4 00 **-4** 00 180.00 0.00 4300.0 10.36 186.79 3970.7 -1088.8 -129.61096.5 4.00 -4.00 0.00 180.00 4400.0 6.36 4069.6 186.79 -1103.2-131.3 1111.0 4.00 -4.00 0.00 180.00 4500.0 2.36 186.79 4169.3 -1110.8 -132.2 1118.6 4.00 -4.00 0.00 180.00 4559.0 0.00 186.79 4228.3 -1112.0 -132.3 1119.8 4.00 -4.000.00 -180.005 : Start Hold Section MD Incl TVD VS +N/-S +E/-W Azim Build Turn TFO ft deg deg ft ft ft ft deg/100ft deg/100ft deg/100ft deg 4600.0 0.00 186.79 4269.2 -1112.0 -132.31119.8 0.00 0.00 n nn 186.79 4700.0 0.00 186.79 4369.2 -1112.0-132.31119.8 0.00 0.00 0.00 186.79 4788.8 0.00 186.79 4458.0

-1112.0

-132.3

1119.8

0.00

0.00

0.00

186.79

## Weatherford Directional Services **Planning Report**

Plan:

Company: Enduring Resources
Field: Uintah Basin (NAD 83)
Site: Southam Canyon 9-24-24-36

Well: 24-36 Wellpath: 1

Date: 8/1/2005 Time: 07:20:06 Pag Co-ordinate(NE) Reference: Site: Southam Canyon 9-24-24-36

Page:

Vertical (TVD) Reference: KB 5295.8 Section (VS) Reference:

Well (0.00N,0.00E,186.79Azi) Plan #1

Section	5 :	Start	Hold
---------	-----	-------	------

MID ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100f	Turn t deg/100ft	TFO deg
4800.0	0.00	186.79	4469.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
4900.0	0.00	186.79	4569.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5000.0	0.00	186.79	4669.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5100.0	0.00	186.79	4769.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5200.0	0.00	186.79	4869.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5300.0	0.00	186.79	4969.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5400.0	0.00	186.79	5069.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5500.0	0.00	186.79	5169.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5600.0	0.00	186.79	5269.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5700.0	0.00	186.79	5369.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5800.0	0.00	186.79	5469.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
5900.0	0.00	186.79	5569.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6000.0	0.00	186.79	5669.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6100.0	0.00	186.79	5769.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6200.0	0.00	186.79	5869.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6300.0	0.00	186.79	5969.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6400.0	0.00	186.79	6069.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6500.0	0.00	186.79	6169.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6600.0	0.00	186.79	6269.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6700.0	0.00	186.79	6369.2	~1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6800.0	0.00	186.79	6469.2	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6843.7	0.00	186.79	6512.9	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79
6843.8	0.00	186.79	6513.0	-1112.0	-132.3	1119.8	0.00	0.00	0.00	186.79

### Targets

Name Description Dip. D	TVD Dir. ft	+N/-S ft	+E/-W ft	Map Northing m	Map Easting m		- Lat Mir	titude - 1 Sec		< ] Deg ]	Longitude Min Sec
PBHL (660'FSL & 1980'FWL) -Rectangle (200x200) -Plan hit target	6513.0	-1112.0	-132.3	2186181.35	699394.62	39	59	12.890	N 1	09	9 53.830 W

#### **Casing Points**

MD 1	Ħ		Hole Size in	Nai
	40.0	20.000	26.000	20"
	00.0	8.625	12.250	8 5/8"
6843.7 65	12.9	4.500	7.875	4 1/2"

#### **Formations**

MD ft	TVD ft	Formations	Lithology Dip Angl	e Dip Direction deg
	0.0	UINTA	0.00	0.00
548.0	548.0	GREEN RIVER	0.00	0.00
2754.3	2682.0	WASATCH	0.00	0.00
4788.8	4458.0	MESAVERDE	0.00	0.00

#### Annotation

MD ft			
3861.5	3558.0	ENTRY (Lower Wasatch @ 3558' TVD)	٦

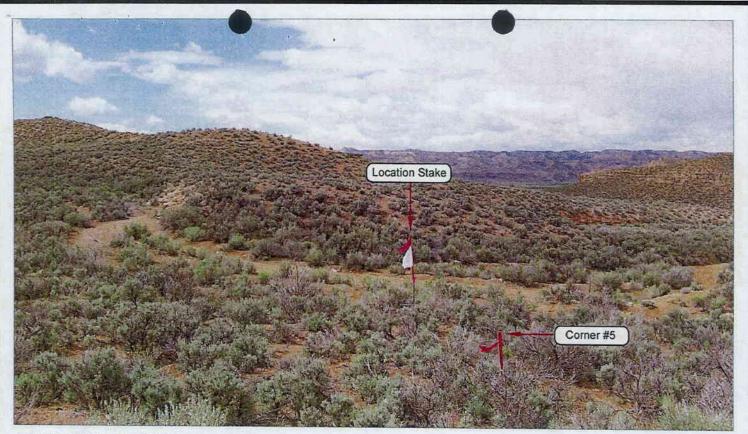


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHERLY

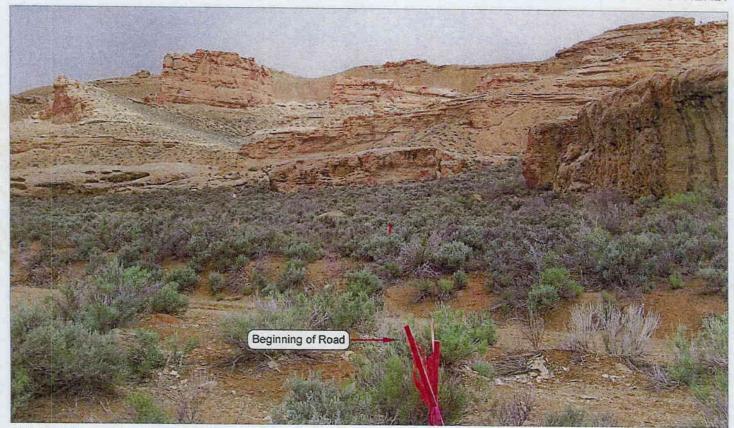


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHWESTERLY

### **ENDURING RESOURCES**

Southam Canyon 9-24-23-36 SECTION 36, T9S, R24E, S.L.B.&M. 1779' FSL & 2073' FWL

LOCATION	DATE TAKEN: 05-09-0		
LOCATION	1110100	DATE DRAWN: 05-17-05	
TAKEN BY: K.R.K.	DRAWN BY: T.D.H.	REVISED: 06-30-05	

Timberline	Land	Surv	eyin	g,	Inc.
38 West 100		Vernal,			

SHEET 1 OF 11

## INDURING RESOURCE

### WELL PAD INTERFERENCE PLAT SOUTHAM CANYON 9-24-23-36

BASIS OF BEARINGS IS THE EAST LINE OF THE SE 1/4 OF SECTION 36, T9S, R24E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR NO0'01'26"E.

BASIS OF ELEVATION IS TRIANGULATION STATION JEK 9 ET (1966) LOCATED IN THE NW 1/4 OF SECTION 32, T9S, R25E, S.L.B.&M. THE ELEVATION OF THIS BENCH MARK IS SHOWN ON THE SOUTHAM CANYON 7.5 MIN. QUADRANGLE AS BEING 5729'.

#### SURFACE POSITION FOOTAGES:

SOUTHAM CANYON 9-24-23-36 1779' FSL 2073' FWL

SOUTHAM CANYON 9-24-24-36 1772' FSL 2112' FWL

### **BOTTOM HOLE FOOTAGES**

SOUTHAM CANYON 9-24-23-36 VERTICAL

SOUTHAM CANYON 9-24-24-36 660' FSL 1980' FWL

# RELATIVE COORDINATES From Surface Position to Bottom Hole WELL NORTH EAST 23-36 VERTICAL 24-36 -1,112' -132'

Vertical Well

LATITUDE & LONGITUDE
Surface Position — (NAD 83) Autonomous

WELL N. LATITUDE W. LONGITUDE
23-36 — 39'59'23.95" 109'09'52.64"
24-36 39'59'23.88" 109'09'52.13"

PROPOSED GRADED GROUND ELEVATION OF PAD IS 5284.8'

 LATITUDE & LONGITUDE

 Bottom Hole - (NAD 83) Autonomous

 WELL
 N. LATITUDE
 W. LONGITUDE

 23-36
 VERTICAL

 24-36
 39\*59'12.89"
 109\*09'53.83"

Section 36, T9S, R24E, S.L.B.&M.

Date Surveyed:

5-9-05

 Qtr/Qtr Location:
 NE SW
 Footage Location:
 1779' FSL
 2073' FWL

 Date Last Revision:
 Timberline
 (435) 789-1365
 SHEET

Surveyed By. K.R.K. Drawn By. C.B.T. Scale: 1" = 60'

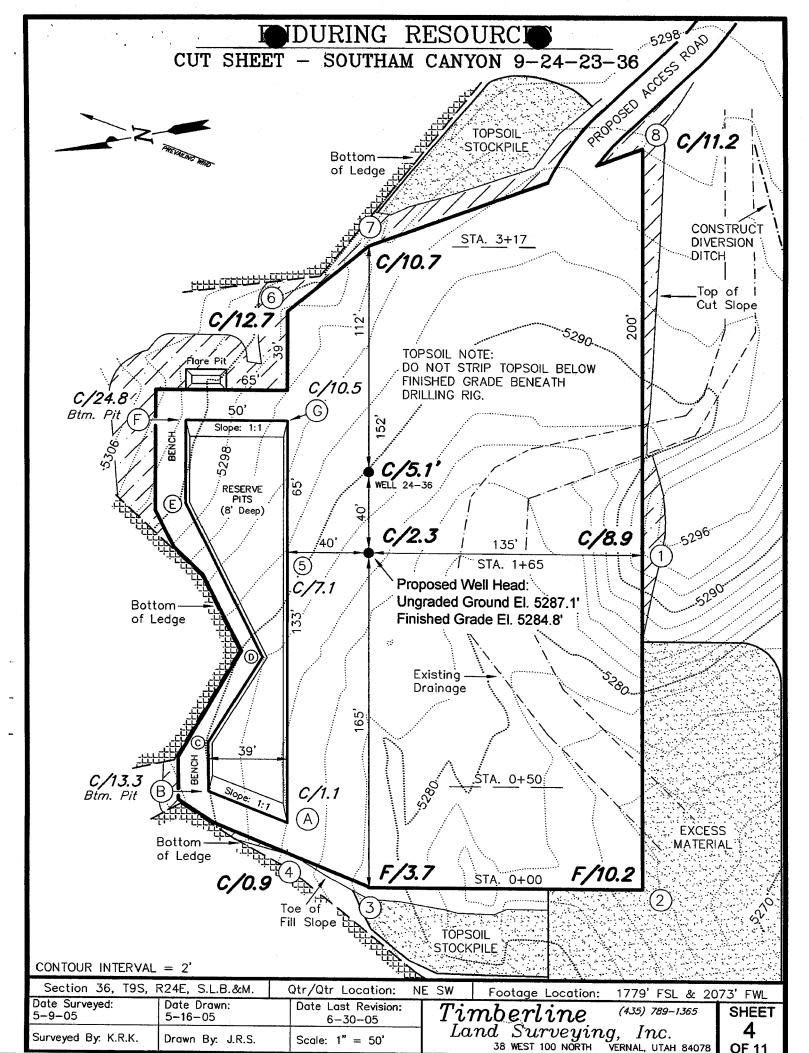
Date Drawn:

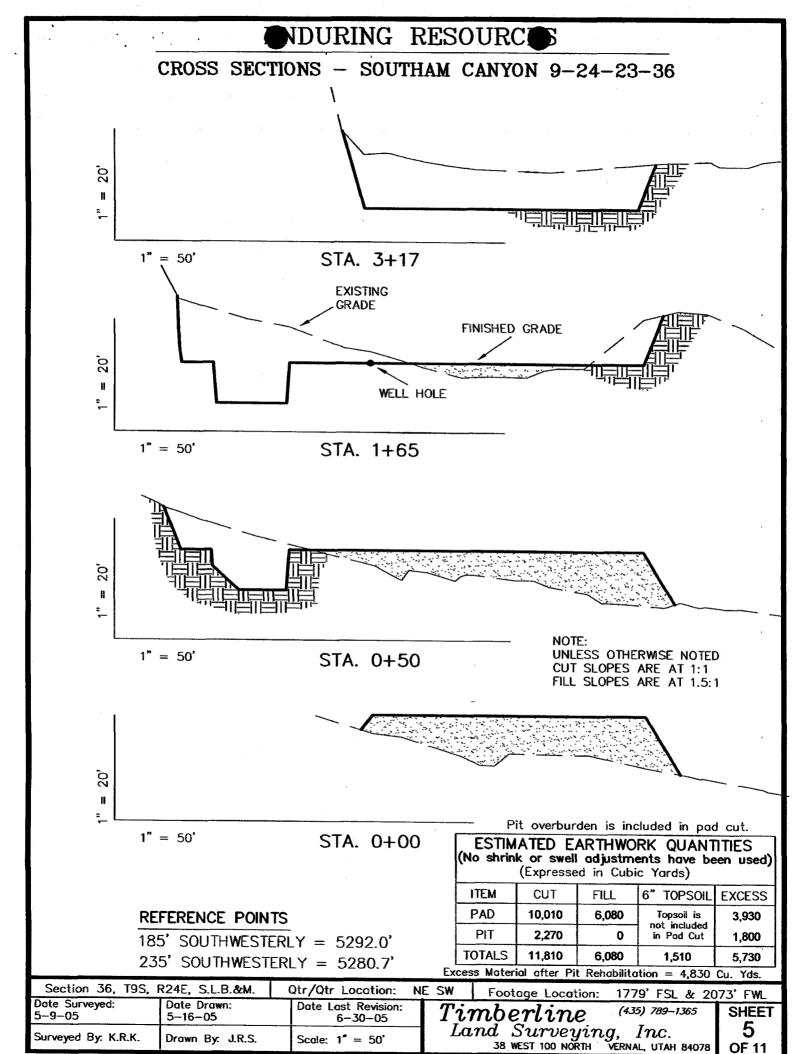
6-30-05

Timberline (435) 789-1365

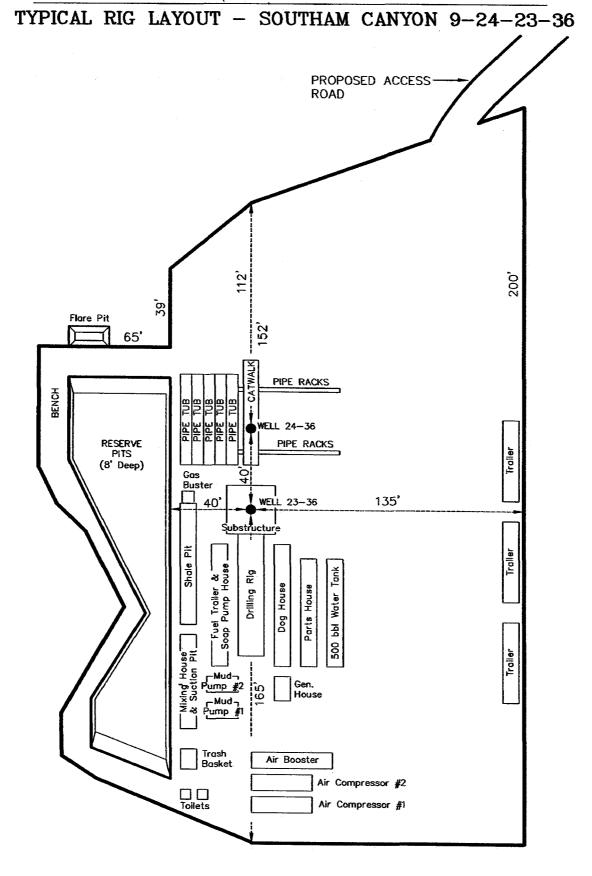
Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078

3 OF 11





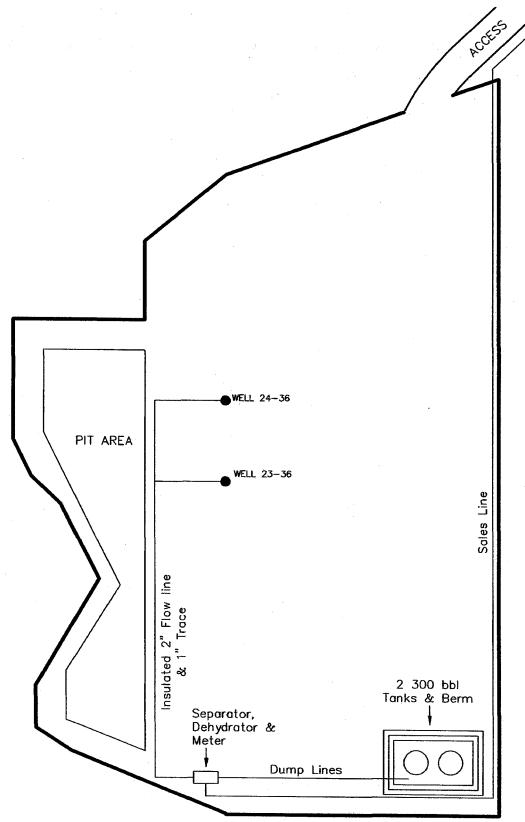
### EDURING RESOURCE



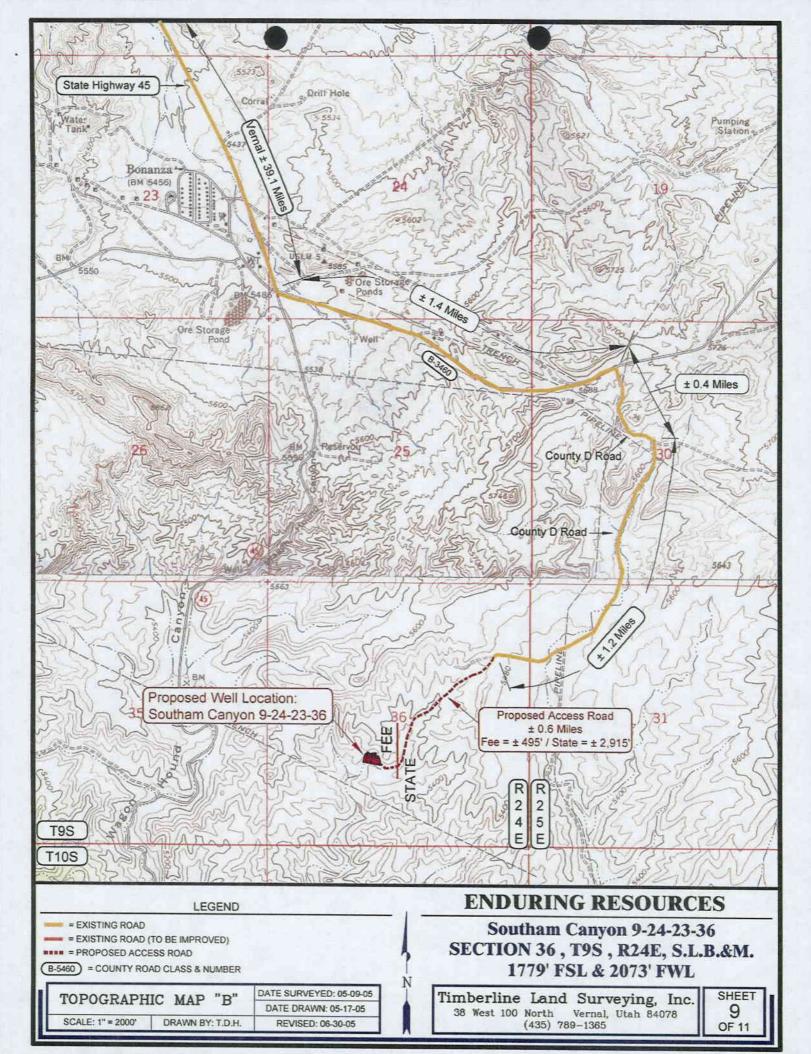
Section 36, T9S,	R24E, S.L.B.&M.	Qtr/Qtr Location:	NE SW	Footage Location:	1779' FSL & 20	73' FWL
Date Surveyed: 5-9-05	Date Drawn: 5-16-05	Date Last Revision: 6-30-05		mberline	(435) 789-1365	SHEET
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	La	ind Surveying	g, Inc.	6

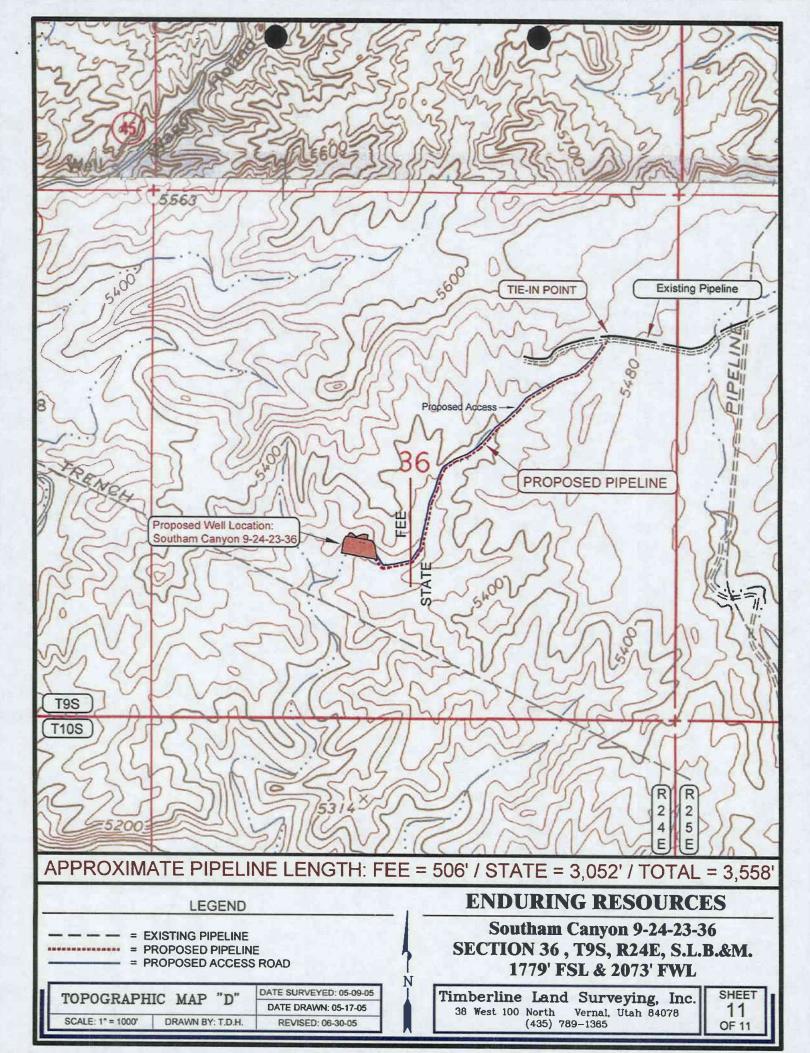
### DURING RESOURCE

TYPICAL PRODUCTION LAYOUT - SOUTHAM CANYON 9-24-23-36



Section 36, T9S,	R24E, S.L.B.&M.	Qtr/Qtr Location:	NE SW	Footage Location:	1779' FSL & 20	73' FWL
Date Surveyed: 5-9-05	Date Drawn: 5-16-05	Date Last Revision: 6-30-05		mberline	(435) 789-1365	SHEET
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	$^{-}$ $La$	nd Surveyin	g, Inc.	







State of Utah

Department of Natural Resources

> MICHAEL R. STYLER Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA Division Director JON M. HUNTSMAN, JR. Governor

GARY R. HERBERT Lieutenant Governor

> Amended August 15, 2005

Enduring Resources, LLC 475 17th St., Suite 1500 Denver, CO 80202

Re:

Southam Canyon 9-24-24-36 Well, 1772' FSL, 2112' FWL, NE SW, Sec. 36, T. 9 South, R. 24 East, Bottom Location 600' FSL, 1980' FWL, SE SW, Sec. 36, T. 9 South, R. 24 East, Uintah County, Utah

### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-36879.

Sincerely,

K. Michael Hehitten

Associate Director

pab Enclosures

cc:

**Uintah County Assessor** 

Bureau of Land Management, Vernal District Office

Operator:	Enduring Resources, LLC
Well Name & Number	Southam Canyon 9-24-24-36
API Number:	43-047-36879
Lease:	Fee
Location: NE SW	Sec. 36 T. 9 South R. 24 East
<b>Bottom Location:</b> <u>SE SW</u>	Sec. 36 T. 9 South R. 24 East

### **Conditions of Approval**

### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### 2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

### 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

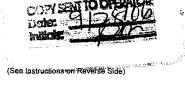
- 4. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.
- 5. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

Page 2 API #43-047-36879 August 15, 2005

- 6. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)
- 7. Surface casing shall be cemented to the surface.

**STATE OF UTAH**DEPARTMENT OF NATURAL RESOURCES

	DIVISION OF OIL, GAS AND M	IINING		5. LEASE DES FEE	IGNATION AND SERIAL NUMBER:
SUNDRY	Y NOTICES AND REPORT	TS ON WEL	LS	n/a	ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill a	new wells, significantly deepen existing wells below o laterals. Use APPLICATION FOR PERMIT TO DRILI	current bottom-hole dep	th, reenter plugged wells, or to	7. UNIT or CA	AGREEMENT NAME:
1. TYPE OF WELL OIL WELL		1 1 1 1 1 1 1			e and NUMBER: 1 Canyon 9-24-24-36
2. NAME OF OPERATOR: Enduring Resources, LLC	·			9. API NUMBE 4304736	
3. ADDRESS OF OPERATOR:	Domina CO	00000	PHONE NUMBER:		POOL, OR WILDCAT:
475 17th Street, Suite 1500 4. LOCATION OF WELL	Denver STATE CO	ე⊳ 80202	(303) 350-5719	Wildcat	
FOOTAGES AT SURFACE: 1772'	FSL - 2112' FWL			COUNTY: U	lintah
QTR/QTR, SECTION, TOWNSHIP, RAI		24E S		STATE:	UTAH
11. CHECK APP	ROPRIATE BOXES TO INDICA	TE NATURE	OF NOTICE, REPO	ORT, OR OT	THER DATA
TYPE OF SUBMISSION			YPE OF ACTION		
Enduring Resources, FROM: 8/15/	ACIDIZE  ALTER CASING  CASING REPAIR  CHANGE TO PREVIOUS PLANS  CHANGE WELL NAME  CHANGE WELL STATUS  COMMINGLE PRODUCING FORMATIONS  CONVERT WELL TYPE  OMPLETED OPERATIONS. Clearly show all  LLC respectfully request an exter/2006  /2007	OPERATOR PLUG AND PLUG BACC PRODUCTI S RECLAMAT RECOMPLI	STRUCTION  R CHANGE  ABANDON  ( ON (START/RESUME)  TION OF WELL SITE  ETE - DIFFERENT FORMATION  Cluding dates, depths, volume	SIDET TEMP TUBIN VENT WATE OTHE	REFORATE CURRENT FORMATION  TRACK TO REPAIR WELL  ORARILY ABANDON  NG REPAIR  OR FLARE  ER DISPOSAL  ER SHUT-OFF  RE: Request for APD  Extension  On for Permit to Drill
NAME (PLEASE PRINT) Evette Bis		Lita	roved by the h Division of as and Mining	pliance Ass	istant
SIGNATURE	He Bissette	DAT	8/21/2006		
(This space for State use only)		O OT TICES	EDATOR		



**RECEIVED** AUG 2 3 2006



### Application for Permit to Drill Request for Permit Extension Validation

Validation
(this form should accompany the Sundry Notice requesting permit extension)

	4304736879		
Well Name: Location:	Southam Canyon 9-24-24-36 1772' FSL - 2112' FWL, NESW,	Sec 36 T9S-R24E	
	mit Issued to: Enduring Re		
	Permit Issued: -8/15/2005		
above, hereby	verifies that the information	es to drill on the property as permitted as submitted in the previously and does not require revision.	
Following is a verified.	checklist of some items rela	ated to the application, which should be	<u> </u>
	rivate land, has the ownersh en updated? Yes⊡No⊡	nip changed, if so, has the surface	
	s been drilled in the vicinity siting requirements for this	of the proposed well which would affect location? Yes□ No ☑	:t
	n any unit or other agreeme peration of this proposed w	ents put in place that could affect the ell? Yes⊡No☑	
	en any changes to the acce could affect the proposed lo	ess route including ownership, or right- ocation? Yes □ No ☑	
Has the approv	ved source of water for drilli	ng changed? Yes□No <b>☑</b>	
	ire a change in plans from v	the surface location or access route what was discussed at the onsite	
Is bonding still	in place, which covers this	proposed well? Yes⊠No□	
Signature	Busself	8/21/2006 Date	
Title: Regulator	ry Compliance Assistant		
Representing:	Enduring Resources, LLC	BECE	11.7

### **STATE OF UTAH**

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

### CONFIDENTIAL 5. LEASE DESIGNATION AND SERIAL NUMBER:

FORM 9

Siviolott of Otal of the time.	FEE			
SUNDRY NOTICES AND REPORTS ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	plugged wells, or to 7. UNIT or CA AGREEMENT NAME: n/a			
1. TYPE OF WELL OIL WELL GAS WELL OTHER	8. WELL NAME and NUMBER: Southam Canyon 9-24-24-36			
2. NAME OF OPERATOR:	9. API NUMBER:			
Enduring Resources, LLC	4304736879 NUMBER: 10. FIELD AND POOL, OR WILDCAT:			
	350-5719 Wildcat			
4. LOCATION OF WELL				
FOOTAGES AT SURFACE: 1772' FSL - 2112' FWL COUNTY: Uintah				
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 36 9S 24E S	STATE: UTAH			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NO	OTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION TYPE OF				
NOTICE OF INTENT (Submit in Duplicate)  ACIDIZE  DEEPEN  ACIDIZE  FRACTURE TREAT	REPERFORATE CURRENT FORMATION SIDETRACK TO REPAIR WELL			
(Submit in Duplicate)				
8/21/2006 CHANGE TO PREVIOUS PLANS OPERATOR CHANGE	=			
CHANGE TUBING PLUG AND ABANDON	VENT OR FLARE			
SUBSEQUENT REPORT CHANGE WELL NAME PLUG BACK	WATER DISPOSAL			
(Submit Original Form Only)  Date of work completion:  CHANGE WELL STATUS  PRODUCTION (STAR*	<u> </u>			
COMMINGLE PRODUCING FORMATIONS RECLAMATION OF W	TELL SITE OTHER: Request for APD  EXTENSION  EXTENSION			
CONVERT WELL TYPE RECOMPLETE - DIFFI	ERENT FORMATION EXCENSION			
Enduring Resources, LLC respectfully request an extension to the expirations. Search show all pertinent details including details includin	ion date of this Application for Permit to Drill  the			
NAME (PLEASE PRINT) Evette Bissett TITLE Regulatory Compliance Assistant				
SIGNATURE GUILLO DISCLES DATE 8/2	20/2007			

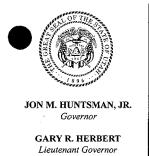
(This space for State use only)

AUG 2 4 2007

### Application for Permit to Drill Request for Permit Extension Validation

Validation
(this form should accompany the Sundry Notice requesting permit extension)

NPI: 4304736879  Vell Name: Southam Canyon 9-24-24-36  Location: 1772' FSL - 2112' FWL, NESW, Sec 36, T9S-R24E  Company Permit Issued to: Enduring Resources, LLC  Date Original Permit Issued: 7/11/2005
The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.
Following is a checklist of some items related to the application, which should be rerified.
f located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☐
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes□No☑
Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes□No☑
lave there been any changes to the access route including ownership, or right- of-way, which could affect the proposed location? Yes ☐ No ☑
las the approved source of water for drilling changed? Yes□No☑
Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes□No☑
s bonding still in place, which covers this proposed well? Yes ☑No ☐
buttle Bissett 8/20/2007
Signature Date
itle: Regulatory Compliance Assistant
Representing: Enduring Resources, LLC





MICHAEL R. STYLER Executive Director

Division of Oil, Gas and Mining

October 1, 2008

JOHN R. BAZA
Division Director

Al Arlian Enduring Resources Inc. 475 17<sup>th</sup> St., Suite 1500 Denver, CO 80202

Re: APD Rescinded – Southam Canyon 9-24-24-36, Sec. 36 T. 9S, R. 24E

Uintah County, Utah API No. 43-047 -36879

Dear Mr. Arlian:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on August 15, 2005. On August 24, 2006 and on August 27, 2007, the Division granted a one-year APD extension.

No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective October 1, 2008.

A new APD must be filed with this office for approval <u>prior</u> to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason

**Environmental Scientist** 

cc: Well File

Brad Hill, Technical Services Manager

